ADDRESS DATA QUALITY CONSULTATION RESPONSES

Overview

This consultation sought views on appropriate methods for improve the consistency and quality of address data across the electricity and gas industries. The purpose of this consultation is to seek the views of electricity and gas market participants and other interest parties in order to inform the Address Data Working Group (ADWG)'s final report and recommendations to Ofgem.

Consultation Respondents

Respondent	Role(s) Represented
National Grid Distribution	Gas Transporter
SmartestEnergy	Electricity Supplier
Northern Powergrid	Electricity Distributor
Power Data Associates Ltd	Supplier Agent and Consultant
ESP Utilities Group	Independent Gas Transporter
ESP Electricity Limited	Independent distribution business
Scottish Power Energy Networks	Distribution Business
GB Group plc	Established energy industry provider of address and identity management solutions and services
UCL Energy Institute	Research into Energy, in particular matching gas and electricity meters to UPRNs and Valuation Office Agency UARNs (premises)
Switch Gas and Electric Limited	Switching/price comparison service
First Utility	Gas Shipper & Supplier
Western Power Distribution	Electricity Distribution Business
Flow Energy	Dual Fuel domestic supplier & gas Shipper
Fulcrum Pipelines Limited	Independent Gas Transporter
Utilita Energy Ltd	Dual Fuel Supplier Gas Shipper Meter Operator Meter Asset Manager
Electricity North West Limited	Electricity Distribution Business

Switching/price comparison service 1	switching/price comparison service
SSE Energy Supply Limited	Dual Fuel Supplier
RWE npower	Supplier
E.ON	Gas Shipper & Dual Fuel Supplier
Wales & West Utilities Ltd	Gas Transporter
ElectraLink Limited	Data Transfer Service provider
Money Saving Expert	Comparison service
switching/price comparison service 2	Price comparison website
GTC	Independent Gas Transporter and Independent Distribution Network Operator
EDF Energy	Dual fuel Supplier and gas shipper
Northern Gas Networks	Gas Transporter
Xoserve Limited	Gas Transporter Agency
Money supermarket	Price comparison
UK Power Networks	Distribution Business
ScottishPower	Dual Fuel Supplier
Scotland and Southern Gas Networks	Gas Transporter
British Gas	Dual Fuel Supplier

ADDRESS DATA QUALITY CONSULTATION RESPONSES

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.

Respondent	Response
National Grid Distribution	The data National Grid Distribution (NGD) holds within their internal systems is received from the central Supply Point Register held by Xoserve. In addition to this, NGD holds further address information which has been derived from AddressBase and this complements the data we receive from the central Supply Point Register. Address data is used to carry out a multitude of business processes including but not restricted to emergency response, new connections, mains replacement, theft of gas and network planning. The data held within NGD systems is not used directly to assist in the customer switching process although any address errors which are found during our activities can be fed back to Xoserve via the address update process ensuring that such address amendments are reflected in the central Supply Point Register.
SmartestEnergy	Our systems hold a site address for pricing, a site address for billing and a customer/correspondence address for billing. We also have the MPRS address in our systems for registration purposes.
Northern Powergrid	As a distribution business we hold the Meter Point Administration Number (MPAN) Address in the Meter Point Administration System (MPAS). Updates to address information can be transferred over the Data Transfer Network (DTN) via formal data flows and in the agreed format as set out in the data transfer catalogue. Once captured within the Meter Point Administration Service (MPAS) system it then gets transferred to the Electricity Central Online Enquiry Services (ECOES) which is available to view by market participants. Our address data may be utilised by suppliers as part of the change of supplier process, potentially to select the Meter Point Administration Number (MPAN) or validate the address/MPAN provided by the customer. Failure to identify the correct MPAN or identification of an incorrect MPAN could result in delays to the customer switching process or erroneous transfers. Our address data (circa4.0m records) has undergone an initial data cleanse to validate our data in line with Postal Address Format data (using the Ordnance Survey product Address_Base_Premium). In addition, and where possible, we have applied the UPRN to our records. We are currently in the process of implementing a system to maintain our address data in this way on an enduring basis. In terms of supplier address amendment requests, to ensure we maintain the quality of our

	address data each request is validated in line with Royal Mail and our existing MPAN data prior to accepting or rejecting the request.
Power Data Associates Ltd	In our role as an unmetered Meter Administrator the address details are 'virtual' rather than real. An address for the customer virtual exit point will typically be the authority office address who will be responsible for thousands possibly a few hundred thousand real exit points, which are not recorded with electricity industry systems. The real exit points are recorded in customer inventories, sometimes this is rather vague, or may be very precise. There are a number of metered street furniture supplies. These range from multiple historic street side cabinets to 50,000 recent new connections to telecoms equipment cabinets. Is not clear if or how these acquire a UPRN as they do not feature in the planning process or are perceived as properties. Therefore the local authority is unaware of their creation. As these locations have often been difficult to properly describe the ability to identify then fully on an accurate mapping product would be useful. The right hand [insecure] cabinet below is located on the Thames embankment and contains a metered electricity supply. This supply powers some lighting locally.  The wooden cabinet below contains several metered supplies, which at the time of the photo had become redundant. Adjacent to the Thames again I am unclear how they would ever have an UPRN. Further along the road there are street cabinets supplying power to sump pumps and underpass lighting.

	
ESP Utilities Group	We hold the Supply Point Address on a bespoke internal system. The address describes the location at which the ECV is found at the point of service termination, to aid any maintenance/replacement works required throughout its' lifespan. It is held in PAF format and is updated as per information from Plot to Postal (P2P) documents received from the shipper, local authority or developer. New addresses are validated against the history of both the individual supply point and the CSEP as a whole. Addresses are not changed if they have previously been confirmed correct as per a P2P document. Addresses are shared with shippers at the point of registration for a new site. Once registered, the addresses are again shared with the shipper at the point a meter fit report is issued. Address data is shared with Xoserve in a SCOGES file to update their Data Enquiry service. This is a daily submission of address updates only, not a complete portfolio submission. The Change of Supply (CoS) file received from the incoming shipper mandates the inclusion of the Outcode which is validated against the information held in our system. If this does not match, the CoS is rejected.
ESP Electricity Limited	The address describes the geographical location at which the meter point is located to enable suppliers to identify the correct property for registration and to ensure the correct property is involved in the switching process. We hold the meter point address on our MPAS system and an internal bespoke system used for asset management purposes. MPAN addresses that are settled Half Hourly (HH) are also held in our billing system for site specific billing purposes. In MPAS and our assess management system, the address is held in Standard Address Format (SAF) and is updated as per information from Plot to Postal (P2P) documents received from the supplier, local authority, developer or Independent Connections Provider (ICP). In our billing system, the address is not held in either SAF or PAF as it is not used by the

	industry to validate such processes as supplier switching, initial registration etc. It is only used on the HH invoices sent to Suppliers. In our experience, suppliers do not validate the addresses on HH DUoS invoices. New addresses (including address updates) are validated against the history of both the individual metering point and the distribution network as a whole. Addresses are not changed if they have previously been confirmed correct as per a P2P document or amending the address would cause a duplicate to be created for an already existing address. Addresses are created when a new network has been awarded to ESPE and the design approved. Suppliers can have sight of the address on the Electricity Central Online Enquiry Service (ECOES) for registration purposes. Any changes to MPAN addresses are uploaded to ECOES on a daily basis and data flows sent directly to the relevant parties.
Scottish Power Energy Networks	Scottish Power Energy Networks hold the Meter/Supply Point Address for the following purposes: • Connections • Network Maintenance • Fault Resolution • Meter Point Administration • Planned Outage Notifications We hold the supply address for each property in our internal systems, in addition to this we may also hold the following additional address details, depending on the stage of the property, and whether this information has been provided by other Industry Parties: • Customer/Builder information • Premise owner • Alternative details • Site contact • Priority Services Contact • Alternative Service Contact Meter/Supply Point Address Information is held in standard SAF format, on a number of internal systems, with one 'Master Address System'. We have one central point for the receipt of address updates and associated information, these are managed on a manual input basis which then forms part of an overnight automated look-up against the OS Address Base Premium dataset. Any rejections are passed back to the originator to clarify the information. Meter/Supply Point Address Information is shared via an ECOES extract. This is critical to the COS process as this is the key data that the COS will be validated against.
GB Group plc	**Utility Data Held and Processed by GBG** GB Group (GBG) provides address management and identity validation software solutions and services across all market sectors. It has been working with the gas and electricity industry since the mid-1990s when it was selected by British Gas-Transco during the gas deregulation process to address-match the Sites and Meters database and to provide a rapid addressing and MPRN lookup tool ('M-View') for transporters and new suppliers alike. GBG produced an electricity version ('SupplyPoint') for the electricity deregulation in the late 1990s shortly followed by a combined gas/electricity product called the Utilities Register (UR) in which the gas and electricity details are brought together for a property address. This is currently in

	widespread use by several suppliers and distributors as well as by the many of the major price-comparison web sites. More widely GBG has been commissioned by DECC in recent years to consolidate six years of Energy Consumption data, linked to each individual property and meter point to assist in mapping the UK energy consumption profile. **Purpose** GBG receives the meter/supply point data (both the ECOES and the Xoserve/IGT data) from its supplier customers, acting as a data processor. These addresses are then matched together and also cleansed against Royal Mail Postcode Address File and any address corrections and postcode updates are applied. The data is then published back to the suppliers/distributors through GBG's Internet-based web search service or via secure sFTP. Agents and aggregators subscribing to the service require permission in the form of a written agreement from a supplier (one of the 'big six') in order to gain access to the service provided by GBG. GBG's software product in widely known across the energy industry as 'Utilities Register'. **Where Held and Format** The data is matched, validated and published by GBG into its own proprietary format and held on servers at our datacentre from where our web services are hosted. GBG's unique technology provides highly index search functionality on 'address', 'meter number' or simply 'geo-spatial reference' where available. Data matching confidence scores are provided to each address record created and published by GBG. Additionally, the data can be distributed to customers to work with locally-installed software solutions and integrations. **Validation/Maintenance** GBG receives ECOES updates from its supplier customers on a monthly basis. The SCOGES/IGT data is received on a quarterly basis. The addresses are validated and cleansed, including correction of postcode and address details by matching to Royal Mail's PAF file. Properties that cannot be validated against PAF such as plots, some flats/apartments, non-deliverable addresses and also those which cannot be matched with a high-enough degree of confidence, are still included within the final output database for the Utilities Register: GBG does does not throw any record away. Our Utilities Register database may therefore contain the same property twice under two different guises: '6, Acacia Avenue' (matched to PAF) will have an MPRN against it, but no MPAN. However, 'Rose Cottage, Acacia Avenue' (not matched to PAF) may have an MPAN associated with it but no MPRN. Without reference to a more comprehensive data source such as AddressBase, there is no way to confirm that these are the same property. GBG rebuilds its Utilites Register data on a monthly basis, following the receipt of the ECOES and monthly PAF refreshes. However, some of our customers also take daily PAF changes files which they apply to a local copy of our data. This further improves data accuracy. **Data Sharing and Role in Switching Process** As discussed above, GBG makes its data available to its customers (suppliers, distributors/ transporters and authorised aggregators/switching agents) through its Utilities Register, a SOAP/XML based web-service which can be integrated into client's customer-service and registration systems. The Utilities Register is used by several of the leading switching sites for

	the capture and validation of customer details. Some of our clients use the service purely as an online address lookup (user enters postcode and selects address from a drop-down list). Others retrieve the MPAN/MPRN, meter serial numbers, the meter type, Grid Supply Point ID and also the top-line data in order to help calculate a more accurate tariff estimate for the consumer. The U web service also allows users to search on MPAN/MPRN and meter serial number as alternatives for hard-to-find addresses.
UCL Energy Institute	We are not your typical respondent. We hold and use third party data and use this to match energy use between non-domestic buildings and data held in the Valuation Office Agency (VOA) Rating List and a range of Ordnance Survey products, including AddressBase and the geographical footprints of buildings (OS Mastermap). For some of the data we have been commissioned by DECC to match address data to gas and electricity meter data. We have developed software to optimise this process and have achieved strong match levels of (96% or Gas and 98% for Electricity meters) for one of the London Boroughs. This allows us to match energy meters to addresses (UPRNs) and through this to also match this to the Rating List data which includes floorspace for the premises. In this respect we would argue that we have had some success with matching energy meters to premises (and this is an issue which your report notes is not possible). Validation of the address matching is done via a score method that compares the meter address and the nearest matching UPRN address. We could supply more information about this if you request it. The work has been shared with DECC. We have no role in the customer switching process.
Switch Gas and Electric Limited	We hold the supply address for domestic customers which we provide to energy suppliers when a customer has requested to switch energy supplier to them
First Utility	First Utility holds a meter supply point address: this provides the location of the gas and electricity meters. We would also hold a billing address where our customer wants to be billed at a different address. These addresses are stored separately in our systems to ensure they are not confused with each other. There is sufficient space in our systems to handle multiple lines of address information in a standard uniform format. These addresses are provided by customers accessing switching websites and our own website. We receive address information on dataflows during the switching process which is held in the UK Link and MPAS systems. We can update incorrect address data via dataflows if a customer informs us of a change. Any changes we make are readily visible on the Xoserve Data Enquiry Service. As a growing business we have identified common issues where newly acquired customers are highlighting anomalies with the address detail held in UK Link and MPAS.
Western Power Distribution	WPD hold address data in SAF format as required under the MRA (as per section 3.1 of the Consultation). The addresses are held in the Meter Point Registration System (MPRS) and are also populated across a number of other WPD systems to provide a consistent address structure and format. Updates to addresses are made in accordance with MRA requirements as also outlined in section 3.1. Any amendments to addresses are sent to Suppliers over the national data transfer system, via

	a D0171 flow, and daily address updates are also provided to ECOES via a dedicated secure FTP link. In terms of role within the customer switching process the DNO address is used to identify the correct customer and MPAN to be switched. It is made available through the following channels: • ECOES (Operated by Gemserv) – to Suppliers and their agents • Meter Point Administration Service (WPD) – Customer enquiries via phone or the a web-site service
Flow Energy	**Billing address** – Held in our CRM system in PAF format. **Contact address** - Held in our CRM system in PAF format. The above addresses are looked up by the customer on our white label sign-up system from a commercial 3rd party database. They can be manually edited at customer request after the supply start date. **3rd party address** - Held in our CRM system in PAF format. A 3rd party address can be manually added after the supply start date at customer request and is not shared. **Supply address** – Retrieved from ECOES or Xoserve Data Enquiry and held in our CRM system, Data flows systems, White label and quote system in SAF format. Postal and site addresses may be shared with our metering agents via the DTC in PAF format.
Fulcrum Pipelines Limited	All address details held by ourselves are in PAF. 1-CSEP Site address & 2-Individual Property address 1-Location of development 2-Address of gas supply, provided to shipper to confirm registration and detail for Xoserve Both – in FPL database as provided by developer and later updated with postal address when received Manually from detail received from shipper or end user or LA - using Royal Mail Post Office web site for validation PSR1 documents to Shippers, Meter Fit Report to Shippers post meter installation, reports to Xoserve Only Post code and MPRN used as part of COS validation
Utilita Energy Ltd	We hold address data for Supply points, Billing address and/or Postal address. Supply point is received from GT and MPAS. Postal and Billing address data is customer led. Validation is completed at several points of the registration process. All customer led data is verbally recorded via a sales agent and then reconfirmed with the customer via a sales validation call. Once received it will be validated against industry registration data (GT/MPAS). Wherever a mismatch occurs an exception process will look to manually investigate the issue and rectify where possible. All the data is held in our internal database tables and is held in a non-PAF format. Address data is maintained manually where a customer updates us with new information. This will automatically send updated address details to the industry registration systems via a dataflow. Electricity address data is shared with our data collector, meter operators and PPMIP. Gas address data is shared with MAM, meter reader and Siemens. The customer facing switch process only consists of the sending of top up devices to the

	customer in the form of key and card. In legacy equipment this is supported by sending the address data to PPMIP (elec) and Siemens (gas). If the customer has a smart meter this is an internal process and therefore does not affect the customer. All other processes are required to support the switching process as a whole.
Electricity North West Limited	Address Types : • Supply Point • Customer Address • Billing Address/ Alternative addresses (Connections Billing) • Nominated Contact Addresses – Vulnerable Customers
Switching/price comparison service 1	Postal address lookup provided by Royal Mail (PAF). In relation to energy comparison this allows the comparison system to identify the supply area to which a user belongs, so that their annual consumption can be calculated. Address information is also a supplier requirement to facilitate switching. This postal address information is held on our database. First name and last name are held separately so there is not one table of name and address information. The energy form's postcode look up feature calls the Royal Mail service. The result is displayed to the user for confirmation. Our usual text format syntax validation is present. Postcode tables are updated once every three months. At the point of switching supplier, this information allows a new energy supplier to contact the user (providing they have accepted their information being used in this way). The new supplier may also use the address information to confirm the MPAN or MPRN information that relates to the address.
SSE Energy Supply Limited	Site address – Defines the MPxN address with Postcode level variations. Primary Billing address – If this is different from the Site Address. Copy Billing address – If this is different from the Site Address. Customer Address – Non-Site addresses which may be foreign. All addresses are held in either SAF or PAF format dependant on how the information has been received; the variations of information will be based on whether the customer has used an Internet Comparison Site or called and provided their address details. The addresses are held within the Customer Systems (CS) and sales systems. In SSE's case, our systems use a Proprietary Address System (PAS) which provides one address which returns the MPxN for registration.
RWE npower	**Overall view: Please see below for the responses to this question from our Domestic, npower Business (SME) and npower Business Solution (I&C) segments.** **Domestic:** Within our Domestic Sales, Marketing and Commercial teams, we use and have access to the following: Supply address, Correspondence address (billing address). We use this data for Sales & Marketing campaigns (i.e. commercial and regulatory reasons), identifying dual fuel & single fuel premises. For operational purposes, the above information is stored within SAP and for analytical purposes this data is replicated within a SAS database. There is a process we follow to cleanse address data from our SAS environment, using Experian for campaign activity. Currently this cleansed information is not fed back into our SAP

core systems, but is something we are planning to do in the future.
The information within the SAS database is not shared with any other market participants & does not play any part in the operational customer switching process.

Npower Business:
The Npower Business teams use the following address types:

- Meter / supply point address (service address) this is used for registration and for meter operator purposes only. Rarely used for contact with customer.
- Billing address – where all invoices are sent for settlement – sometimes identical to service address but more typically different.
- Customer address – address of parent company of a group where there can be multiple meters over multiple sites

On notification of a sale (whether internally or externally determined) all data loaded into Salesforce. At this point validation of address / MPAN combination against ECOES is completed and any differences in service address queried with broker, customer or outsource agent. Once MPAN/MPRN has been confirmed as correct (usually via MSN) then we adjust address for service in our systems to reflect ECOES / XOSERVE – even if we know this to be wrong since at this point as not supplying the customer are unable to submit an address update flow (And by the time customer is registered and on supply there is little benefit in updating).
We also contact customer for any address with multiple MPAN/MPRs on same address to ensure we have the correct MSN. The customer then goes through registration and addresses are held internally for Gas in GMS billing system and for Electricity in Siebel.
Service address becomes less important then from a business perspective as the communications we have with the customer are relating to renewal, service/billing queries, debt collection and marketing – these rarely require much information about the individual site location except in the case of erroneous transfer.
We do not share any of the address data collected with other market participants currently.

Npower Business Solutions:
The Npower Business Solutions teams hold a number of address information, all held in standard industry format (i.e. denoting post code information). There are two main types of address that we hold in our central systems:

- site level address; and
- billing address

For Npower Business Solutions electricity team, in the first instance we would rely on information provided by the customer as part of the 'take-on' process to detail the customer name, address and contact information. For npower's I&C team, this information is stored within the 'SPRITE' system (a registration and pricing tool.
Post-sale validation processes are completed using ECOES (Electricity Central Online Enquiry Service) checker tool/system and completing standard checks to ensure mandatory data has been captured. This would include validation of customer supplied details against industry information, for industry Top-Line and addresses.
For corporate customers, npower's I&C teams make use of a 'Pre-Acceptance Check-list' ('PAC'), and the introduction of the 'Master Site Level Portfolio' ('MSLP') to monitor changes to the customer's portfolio.
All of these activities and tools were designed to improve the integrity of the information

	supplied by the customer. In terms of current industry communication (including as part of the switching process), the SPRITE system would handle the industry data flows to 'cascade' address information to our agents. For Npower Business Solutions Gas, we use a slight variation to PAF (Postal Address Format) which mirrors the setup that Xoserve use in SCOGES. At point of sale, our sales teams will validate the information that the customer provides against SCOGES. Billing addresses are advised at a later point and will be validated through online checks to ascertain the validity of the address, and then update this into our systems. Proteus would be used to advise MAPs/MAMs/MRAs of the address of the site via data flow, similar to how Power works. This information is not taken from a previous supplier. This address data is taken from SCOGES as this data should be the most up to date for the site.
E.ON	We hold a number of addresses within our systems which are stored in a PAF valid format. The Gas MPRN and the Electricity MPRN are used to record the meter point address and the address is provided within the standard industry data flows and maintained centrally by the gas and electricity Distribution Networks under their licence and Industry Code obligations. We hold an account address (which can also be a vanity address) in our customer environment – which is provided by the customer, this may or may not be the same as the meter point address. This can be used for circumstances where the customer wishes their bills to be sent to an accounting address or where the Meter Point Address is not the same as where mail is delivered. We can also hold third party contact address – again provided by the customer, which are used in circumstances where communications in respect of the supply point go to a designated third party – as can be the case with vulnerable customers, or other process where there is a third party dealing with an account – such as executors, or landlords etc. The addresses provided by the customers are validated using a commercially procured address data service. Any anomalies or updates identified between the MPAN/MPRN addresses from the validation processes we employ are notified to the network companies using the appropriate query processes.
Wales & West Utilities Ltd	In its capacity as a Gas Transporter Wales & West Utilities use Xoserve to hold and maintain on the Gas Transporters' Supply Point Register both a Supply Point Address and a Meter Point Address in respect of each Supply Point. The data that is held for a Supply Point Address may not be the same as that held for a Meter Point Address. Address data is held on the Gas Transporters' Supply Point Register in order to fulfil certain aspects of Condition 31 "Supply Point Information Service" of the Standard Licence Conditions of each Gas Transporter's Licence, specifically to maintain a register that contains, amongst other data items, "a unique and accurate address of each such premises so far as is reasonably practicable, having regard to the nature and source of the information provided to the licensee". The Supply and Meter Point Address can be created / amended by the following processes: • Address amendment via Xoserve Contact management System

	• M Number creation via Xoserve FOM process • Postal Address File (PAF) update. We create new M numbers for new Supply Points upon acceptance of a customer quotation. Addresses submitted are PAF validated where possible against address products (QAS). It is often the case that address records are not full postal addresses but are plot addresses or holding addresses used prior to the adoption of the road by the Local Authority. Similarly flats created by converting one building into a number of addresses means we are reliant on the customer telling us how they intend to register the property which may be different to the final PAF address e.g. we register flats 1 to 4, 25 Acacia Avenue but the PAF address becomes 25a to 25d Acacia Avenue. Files are submitted to Xoserve systems on a daily basis. Xoserve may reject duplicate or incomplete addresses which are returned to us for further investigation and resubmission. We may amend addresses via the Xoserve systems where investigation shows an address to be incorrect. This may be driven by the outcome of our investigations or following interaction with a customer. We also hold address information in our Asset repository relating to each property that has a gas service. For new connections this will again be PAF validated where possible but where a full address is not available a partial address will be used. Plot addresses are updated upon receipt of a file from the local authority where provided. Legacy addresses imported from National Grid systems at network sale in 2005 will usually be of poorer quality. These addresses are much more challenging to validate.
ElectraLink Limited	ElectraLink has managed the Data Transfer Service (DTS) since it was set up in 1998 to meet the interoperability requirements of the newly de-regulated competitive domestic electricity supply industry. Electricity Market Participants use the DTS to exchange information relating to key industry processes. This includes, amongst other things, data relating to meter installations and change of supply events. In 2012 the users of the DTS granted ElectraLink the ability to capture and analyse DTS data flowing across the Data Transfer Network (DTN) in order to provide stakeholders across the electricity industry with analytics, insight and reporting to enable them to improve industry performance. Copies of the data flows are taken when they are issued across the DTN, and passed through to ElectraLink's analytics database on a D+1 basis, where it can be stored for up to 5 years. This, and the terms of how we can deliver Electricity Market Insight (EMI) to market participants, is governed by the Data Transfer Services Agreement. This means we can see every electricity flow that has been sent across the DTS containing address data since April 2012, which covers approximately 75% of all MPANs, and our view of the registration communications means we have a view of 100% of Change of Supply events – of which we can see 97% of the associated address details. This access to cross-industry data puts ElectraLink in a unique position of being able to view the breadth of variation in address information exchanged, and would provide an excellent opportunity to carry out central validation of this data. The DTN is also used to transport some of the data relating to gas change of supplier activity, specifically the Notification of Old Supplier Information (NOSI) flows, as well as providing the means of communication of Review of Gas Metering Arrangements (RGMA) flows for 5 out of the 'big six' gas suppliers, and their respective commercial agents. While we do not currently have the permissions to store and analyse gas data like we do with electricity, the capability is there were such permission to be granted.

Money Saving Expert	In order to provide Cheap Energy Club users with a personalised comparison and to keep monitoring their energy costs, we hold users' addresses. The information is held securely against the user's account. The address is selected by a user from a dropdown after entering their postcode. The source data is provided by a third party which uses industry feeds which matches addresses to energy regions and MPAN/MPRN numbers. If the user's address is not listed under the postcode, the user is able to manually enter the address. If the user's address is not matched to a supply region, the user is able to manually select their region. The details entered on the application form (or pre-filled via look-up) are provided to the user's chosen supplier to perform the switch.
switching/price comparison service 2	**What data is held?** When someone chooses to switch their energy supplier through [switching/price comparison service 2], we are required to collect information on their meter/supply point address and billing address. Additionally, previous address history is collected in the process of switching to some suppliers. All of this information is captured directly from the customer, either by them picking from a pre-populated list of addresses in their postcode, or by them typing it manually. **What purpose does each piece of data fulfil?** We collect all of the information an energy supplier would require to complete an energy switch, which includes the supply address. We are also required to send across details of the meter(s) to be switched, which comes from data associated with the selected address in around 90% of cases. This information is the main identifier of which meter should be switched. Additionally, we provide customers with the flexibility of receiving correspondence or billing at a differing address, and so collect ancillary address information. Previous address history is required by some energy suppliers to perform credit checks before they accept a customer, and so only at a supplier's request we additionally ask for up to two previous addresses, or three years of address history. **How is the data validated and maintained?** When a customer is able to select an address from a list, they are picking from data from a Royal Mail extract licensed by a third party, GB Group. GB Group additionally provide data extracts of meter numbers sourced from the ECOES and XOSERVE systems which they match to standard Royal Mail addresses. This information is updated monthly, but is usually around 3-6 months behind the data held in ECOES or XOSERVE due to the processes GB have to follow to access the data. **How is the data shared with other market participants?** This data is shared with energy suppliers via daily batch file transfer, in which the data captured from all of the customers who have completed an application to switch to that supplier in a day are translated into either a CSV or XML file and transferred to the supplier. Due to the differing systems in place at each energy supplier, the address data is often translated into a slightly different format, e.g. although it may be captured in Line 1, Line 2 etc format, a supplier may require the data to be transferred as a PAF address, or some bespoke format.

	In cases where any of the data captured from a customer, including but not limited to address data, is wrong, a number of different things can happen. The customer may contact [switching/price comparison service 2] to correct the data before it is sent to the supplier. The customer may contact the supplier directly to amend the captured data. The supplier may delay the switch whilst they contact either [switching/price comparison service 2] or the customer for clarification. The customer may go on supply, but not receive any initial correspondence, the customer may not go on supply at all, or the wrong meter may be switched.
GTC	We hold Meter/Supply point addresses within our systems and do not hold separate information for billing addresses at a customer level. We hold this information for many purposes which include reasons relating to the maintenance and operation of the supply point and for the purpose of billing shippers and suppliers. We hold information relating to gas supply points on our own internal systems. This information is also made available, to a limited extent dependent on who is accessing it, on the GTC website in a password restricted area for shippers and suppliers. We populate and hold electricity meter point information on our own internal systems which we use to transfer address data into MPRS and, therefore, ECOES. As a business dealing in new connections we validate our address data with the developer of the site which we are connecting and the local council. Where possible and appropriate we also use mapping systems to validate address data. Normally, we use information from supplier or shipper queries to update our address data although we are able to maintain address data based on new information from any source, including the customer. Our gas address data is currently shared via a secure section of the GTC website. This is accessible to all shippers and suppliers who are registered on our pipeline systems. It is worth noting that this will change after the implementation of Project Nexus as this information will subsequently be shared via Xoserve. Our electricity address data is shared via industry systems MPRS and ECOES. This data is readily available to all industry parties with the relevant authorisation to access it on ECOES.
EDF Energy	We capture two distinct addresses in our supplier billing systems. • We hold addresses sent to us by MPAS or GTs in relevant flows unchanged and these are kept as our Supply Point addresses. We do no validation on this address data and these are provided to agents in relevant flows as part of our standard processes. For electricity MPANs this address is used on gain to set up a Rota Disconnection Code for relevant premises. This address is used as one piece of information to determine which agents we appoint to maintain metering and deal with capture and processing of reads for that premises. This address is not open to change by majority of our system users but can be done by exception by some users, usually where data has been incorrectly migrated, or automatically on receipt of relevant flows. • As part of our acquisition/new connection processes a customer address, generally referred to as a Billing address is collected and maintained separately from the address above. This is used for all communications sent by letter with the customer regarding their account and will be identical for a dual fuel customer for both MPAN(s) and MPRN relevant to that premises. This data is manually entered or collected over relevant automated interfaces and has very simple validation in terms of field lengths and valid

	characters. For manual entry we have a form that ensures data is stored in a common format that mimics SAF format used in electricity, but as this relies on an agent populating correctly we are aware that this SAF format is not always followed. We use this address in triangulation activities where customer cannot provide an MPAN/MPRN relevant to premises. This address is sent to agents on electricity side on relevant flows as "Mailing Address". In terms of maintenance if first of these addresses is seen to be incorrect then a request for an update will be sent to MPAS (via email) or GTs (via flows or email). Until we get an agreed flow back amending that address though our Supply Point address remains unchanged, apart from in exceptional circumstances previously mentioned. Billing address can be changed by customer on request. Once any changes are confirmed updates are sent, where required, to agents on relevant flows.
Northern Gas Networks	Supply Point Register addresses for the purposes of discharging Gas Transporter Licence Standard Special Condition A31 is held via Xoserve acting in their capacity as the Transporters Agent. Internal service addresses are held on SAP and other IT systems for purposes of maintaining an asset register, undertaking network analysis and other operational processes. Information provided below relates primarily to the data held internally within Northern Gas Networks internal systems. Information relating to data held within Xoserve systems has been addressed within a separate response from Xoserve. **what purpose it fulfils;** Helps determine the location of service pipes and relationship between service pipes and mains to which they are connected, assist customers in queries, recording of operational activity **where it is held and in what format;** It is held in our internal IT systems in relevant data tables **how it is validated and maintained;** There are a number of validation processes depending on the original source of the data and how it is to be used, interpreted or amended. Example of these processes are: • Connections including diversions and isolations • Service replacement projects • Gas Safety Regulations work, e.g. removal of isolated services • Shipperless, Unregistered & Theft of Gas investigations • Demand analysis • Ad-hoc queries Validation of records can be at a variety of levels as not all IT systems use the data at the same level of detail. Validation takes place to match data records specific to the processes being carried out. This validation may be against other internal records or from an independent data source such as post office or Xoserve data. Where comparisons are required against industry data the use of MPRN, property number/name and postcode are the critical fields for matching. Other data items may have importance to some processes but not others, and may therefore not receive validation. Where inconsistencies are identified through the validations processes further investigations

	are undertaken to establish the best rectification route. Where this is identified as being a correction or amendment to the Xoserve held data which the industry interacts with the update is raised through their systems and subject to additional Xoserve validation. Where address queries cannot be resolved by any other means we may undertake a physical site visit where appropriate. **if and how it is shared with other market participants; and** Internal NGN data records are not shared with other market participants **what role, if any, it plays in the customer switching process.** We do receive enquiries from consumers when they are having difficulty in registering their gas supply or changing supplier. This is usually described by the consumer as being "as a last resort" and we will then undertake internal investigations and comparisons to Xoserve held data in order to provide the correct MPRN for registration and carry out any required address data update identified through the enquiry. While this type on enquiry is regular, the volumes are very low in the context of customer switching activity in the market.
Xoserve Limited	In its capacity as the Gas Transporter Agency, Xoserve holds and maintains on the Gas Transporters' Supply Point Register a Supply Point Address in respect of each Supply Point. Address data is held on the Gas Transporters' Supply Point Register in order to fulfil certain aspects of Condition 31 "Supply Point Information Service" of the Standard Licence Conditions of each Gas Transporter's Licence, specifically to maintain a register that contains, amongst other data items, "a unique and accurate address of each such premises so far as is reasonably practicable, having regard to the nature and source of the information provided to the licensee". The Supply Point Address can be created / amended by the following processes: • Address amendment; • M Number creation; and • Postal Address File (PAF) update. Validation of the Supply Point Address occurs during the address amendment process. The proposed address that is submitted by the Shipper is checked to see if it is PAF valid. Proposed addresses that have a full match to PAF records are accepted, and those that have no match are rejected. Where a partial match occurs, Xoserve is able to manipulate the proposed address such that it becomes PAF valid. The extent to which Xoserve is able to validate Supply Point Address data that it receives from Utility Infrastructure Providers (UIPs) through the M Number creation process is limited, as it is often the case that address records are not full postal addresses but are plot addresses or holding addresses used prior to the adoption of the road by the Local Authority. Whilst validation is limited, address records are nevertheless accepted on to the Gas Transporters' Supply Point Register in order to fulfil the requirement to create a Meter Point Reference Number within 24 hours of receipt of the data from UIPs. Supply Point Address data is made available to: • Users (including Suppliers) of the online Data Enquiry Service, noting that the Service extends to the publication (but not validation) of IGT Supply Point Address data; • National Grid, for the purposes of operating the M Number telephone enquiry service; • Meter Read Agents for the purposes of operating the Must Read process;

	• Shippers, during the Supply Point transfer process; and • Gas Transporters for various purposes. Xoserve understands that Shippers and Suppliers use address data in a variety of ways during the Supply Point transfer process, and that some may make no use of the data.
Money supermarket	Moneysupermarket (MSM) hold the supply address and billing address. Supply address is required to identify a property. It permits a comparison of various products on offer from the Energy industry (Gas and/or Electricity). The supply address is linked to specific meter information required for a switch e.g. MPRN. The billing address is requested when a customer proceeds past the comparison and results and wants to apply to switch. The supply address, billing address, specific meter information and other necessary (and sometimes bespoke) information is passed to the Supplier as part of the application process. These are predominantly the same address. Access to the data has to be agreed by one of the big six suppliers. The address data is held in an operational database and is supplied to us by the 3rd party (mentioned above) on a daily basis. The underlying operational database is refreshed to ensure the latest information is presented to MSM customers. The applications are stored in a secure filesystem (short term) and from there, securely delivered to Suppliers to process the switch. The long term storage is a secure database. The data is both validated and maintained by the 3rd party address data supplier.
UK Power Networks	UK Power Networks holds the Supply Point Addresses for customers with MPANs recorded on our three Meter Point Administration Services (MPAS). The remainder of our response to this consultation is related to Supply Point Addresses. **what purpose it fulfils;** The address is used for a number of purposes including: Change of Supplier as part of MPAS; network management; asset management; management of no supply calls from customers; quality of service reporting; and provision of a Supply Number Enquiry Service (SNES). **where it is held and in what format;** The master address record is held in our Meter Point Registration Systems (MPRS), in the standard address format as detailed in the MRA Agreed Procedure 09 (MAP09). The address record is also passed to other internal systems within UK Power Networks. **how it is validated and maintained;** A small team manually reviews and validates address queries and amendments per annum. In addition, on publication of updated Ordnance Survey address data, addresses are automatically updated, linked on Ordnance Survey UPRN.

	if and how it is shared with other market participants; All addresses and address amendments are shared with the registered supplier via the agreed MRA dataflow. An update file is also sent to ECOES which is available to most market participants. The address is also cascaded to our internal systems. **what role, if any, it plays in the customer switching process;** The address and MPAN are held in MPAS and are available to all customers via the SNES. The address, MPAN and related data are held by ECOES which is available to most market participants and supplier nominated customers.
ScottishPower	The address data is used as a key item within the gains process. Its purpose thereafter is primarily for correspondence, including billing, functions. It is also used for appointments relating to meter readings and engineer visits It is held within our sales system and SAP solution and it held in both the PAF and SAF format, dependant on the process. For registrations we hold this in the PAF format. Upon receipt of an address through the sales process, this is validated using a 3rd party solution (PDS by C&C), which references both MPAS and Royal Mail. The address is shared with other market participants, through the relevant registration flows (D0155 / D0142 / D0131 / ONSUP / CMS request). Should the address contained within the flow not match the other party's records, this will be highlighted through the relevant flows (e.g. D0261 / NAC.T08) and will be manually reviewed to ensure that the address data that we hold is accurate. Due to the issues with address data quality across the industry, we often override this warning and use the address that the customer has provided, as this is a more reliable source to give assurance that correspondence and appointments will be directed to the correct address. For I&C sites, there are a number of occasions where the site is a non-address, such as a telephone mast or street lighting. Therefore validation of these addresses is not possible and are entered manually.
Scotland and Southern Gas Networks	SGN holds address details in our systems for metering activities, new connections related work, gas emergency work and we hold address information against each of our service locations. SGN currently uses a Post Office Address File (PAF) to validate address data. The PAF file that we use is periodically updated and loaded into our central systems and is supported by our internal IT resources. The address data that we currently hold in our systems doesn't have a direct impact on customer switching, however our connections business does raise new MPRN's for new build properties. When we raise new MPRN's the address data is fed into Xoserve's systems which may have an impact on customer switching. To ensure the quality of this data, especially concerning plot to postal addresses we do have a process in place to ensure the data is updated. This process is described in further detail in question 5.3 below.
British Gas	We have 4 main address types held on our systems: **Billing Address** This is used as an address for which customers would like to receive their bill which is different to the supply address and is validated and maintained using Experian quick address software. It is held within our Customer Relationship Management (CRM) and billing systems. It is validated by PAF

	Contract Address (Supply Point Address) This is the correct address that we supply. This is linked to the Meter Address and is taken from the Industry. This is the address that is used in flows when customers are switching between suppliers. It is validated by PAF and QAS systems. It is held within our CRM and billing systems **Point of Delivery address (Meter Point Address)** This should match the Contract Address but if address data on industry systems are incorrect we will modify this to register the correct site without damaging the integrity of the core address. This is the address that we quote on registration flows. It has the same initial validation as Contract Address and would only be modified following rejections from industry. It is held within our billing system. **Plot address** Typically held during new connections so that we can reconcile back to agreed contracts with IGTs. This will be populated as the Contract Address as above when first identified and undergo QAS validation. Will be updated in billing and CRM systems when postal address receive. Will continue to be held within New Connections systems for reconciliation.

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).

Respondent	Response
National Grid Distribution	N/A
SmartestEnergy	We are not particularly aware of any problems with mis-registration because of confusion over addresses. If suppliers are careful and confirm details with customers there really should not be any problems. If most erroneous transfers are due to human error as the consultation seems to suggest (selecting wrong MPANs), then having to merge more data in the form of a UPRN could actually increase the risk of erroneous transfer.
Northern Powergrid	N/A
Power Data Associates Ltd	N/A
ESP Utilities Group	N/A
ESP Electricity Limited	N/A
Scottish Power Energy Networks	N/A
GB Group plc	N/A
UCL Energy Institute	No response
Switch Gas and Electric Limited	We verify the supply address against the royal mail database as the royal mail database does not match the MPAN/MPR registers this means that in 10-15% cases we are unable to match the MPAN/MPR
First Utility	The customer journey within the switching process is accurate as described in the consultation. Customers who switch through our website directly have a higher success rate when switching

	their energy supply than those commencing their journey via switching sites. The address validation on our website uses industry information from UK Link and MPAS sources. We find that these requests require little 'triangulation': the customer chooses their address from the industry source, effectively selecting their MPAN / MPRN, although they are not actually exposed to this complexity. We have dedicated service teams that validate all switching requests through our website and by the switching sites to perform triangulation validation and, if required, we contact customers directly to clarify or address any issues.
Western Power Distribution	N/A
Flow Energy	We are happy that the 'Customer journey' covers the switching process. Please see below for our handling of addresses in this process.
Fulcrum Pipelines Limited	N/A
Utilita Energy Ltd	We believe the 'customer journey' outlined in the document is accurate.
Electricity North West Limited	N/A
Switching/price comparison service 1	The user is asked a short number of questions on one form before they are presented with their energy savings results. These questions are sufficient to allow us to work out the user's current consumption, supply area, meter type and preferred payment method. We also ask their email address for switch/sales tracking and follow-up contact. The user is also asked to agree to the Terms & Conditions and Privacy Policy. Most questions are accompanied by helptext. We display FAQ links in the right margin beside the form. We display the logo of our SSL certificate provider and the Ofgem accreditation logo in the right margin also, along with some explanatory text. These pieces of information reassure users and help answer any questions they may have that could otherwise prevent them from completing the form. Our second form question asks the user to enter their postcode and click to find their address. If the postcode entered is invalid the user is alerted to this and asked to check their details. If their address is not found after successfully submitting a postcode the user may enter their address manually.
SSE Energy Supply Limited	The customer journey is accurate. The addresses used are dependent on how the customer signs up to SSE as their nominated Supplier. With regards to Verbal sales, the customer will provide the address for which they wish their property to be known, this can include the use of a vanity address. However, if the vanity address is not recognised, additional information can be obtained from the customer at that point to verify SSE will take over the correct supply. The use of Internet comparison site sign ups can alter the address which the customer selects

	depending on the PAS used. Where an address is not found using this system, the customer can provide their address in free format, therefore again, providing a vanity address. Since the verification for these addresses may not match the data on the National Databases, the customer will be contacted to confirm the selected address for a successful switch. Otherwise there is a risk in which the customer will choose an address which best matches their property, however, this is not the correct address for the supply point.
RWE npower	There are fundamental issues connected to address information driving the selection of an MPAN / meter serial number. Apart from address anomalies (including those already recorded in the industry), there may be multiple meters attached to a single site / MPAN, or related MPANs – therefore a single address as a guide will be problematic. Also, the customer switching journey simply highlights that the customer will select a tariff. For business customers, there are a wide range of products / tariffs which lead to great complexity. Furthermore, there may be bespoke customer arrangements applicable to a customer group, so the indication of a simple tariff selection will lead to design issues. When joining, customers may be asked for MPAN / MPRN by brokers or third party intermediaries to accurately confirm the meter they are talking about. This is possibly one of the major causes of erroneous transfers if there are multiple MPANs at an address (particularly in the case for business customers) – where the first one is selected without consideration. New supplier validates request: In the event where triangulation fails and we have spoken to the customer to confirm address / MPAN / MSN we sometimes get to the state where we know the meter is right but address showing in central systems is wrong. In this case, we change the service address we hold to match central systems but leave billing and customer address as provided by the customer. In very rare cases we will raise a request to change the address for the customer once they are on supply but only if directly requested to by the customer. New supplier issues opening bill: "No communication from new supplier due to ET" – since bill address and service address are different this will not be the case – the customer will start receiving bills even if the wrong MPAN was provided. **Npower Business Solution (gas) process highlighted below:** • Joining – Register the site, after validation of Address/MTD etc. Any issues are then ironed out after the site is nominated and accepted. • Managing – Monitor/update address through contact with the customer, or lead from 3rd party. We update xoserve through industry agreed processes so that our core systems, and xoserve are aligned. • Billing – Site address already validated, or Billing address provided, to which we mail the consumption invoices as per the customer's request. • Leaving – Address not transmitted to new supplier as per industry processes.
E.ON	In respect of the accuracy of the "customer journeys": **The Customer Process:** – I would suggest that the welcome information is likely to precede the final bill from the old supplier, and that there is probably win-back and/or objection activity taking place before the transfers complete and go-live or final and opening bills are issued. **For the Market Process:** Suppliers receive customer request – at this point we use the information provided by the customer (house no, address and post code) to match to the MPRN or MPAN (where possible).

	The information is checked against PAF valid data sources (industry and commercial). Supplier validates request – depending on the sales channel and the customer's ability to provide the information we would ask for the MSN and MPAN or MPRN if they can provide it at the point of sale. Daily we verify the information that is generated from the sales activity to review and check for any mismatched address information between that given by the customer and that returned in generating the transfer request to ensure that we've selected the correct MPRN/MPAN. If there are any mismatches we will check industry systems such as ECOES and DES, we will contact the customer to request additional information. Old and New Suppliers issue bills - this would only occur after other activities have completed. It is likely that the first communication the customer will receive after the sales activity is any "welcome" information provided by the new supplier. This will be the first indication to the customer that the transfer activity is going ahead and providing details of the new contract and transfer date. This may be a trigger point for the customer to contact the current supplier to raise any concerns regarding a potential E.T. The customer may also then receive information about objections or win-back messages from their losing supplier and the new supplier will be in touch with the customer to gain opening reading details. Only after these steps have completed will final and first bills be generated.
Wales & West Utilities Ltd	Wales & West Utilities is not providing a response to this question
ElectraLink Limited	N/A
Money Saving Expert	In the majority of cases, the process works smoothly and the information matched against the user's address allows the supplier to perform the switch. However there are issues, particularly where a user lives in a converted property or in a remote location where there is a mismatch between the data held on the address database and the user's actual supply information. The switch application form contains details of how the user can verify their supply details but this can be a barrier to switching and could be much smoother.
switching/price comparison service 2	At [switching/price comparison service 2] we attempt to provide an energy comparison after capturing the minimal amount of data possible from a customer. As such, the only address data captured from a customer before they see a set of comparison results will be their postcode. This is captured in order to determine a customer's energy region, and to show them the correct prices for their address. There are checks in place to ensure this postcode is both formatted correctly, and is known to correspond to an energy region. The mapping from a postcode to an energy region is provided by a third party (GB Group), who provide us with monthly updates to the data we hold. If the postcode is not found to correspond to an energy region, the customer will not be permitted to continue with their comparison. This prevents around 1% of consumers who are looking to compare their energy from being able to gain a comparison. Once the customer has chosen a plan, and expressed a desire to switch, they are asked to pick

	their full postal address from a list. If there are no known postal addresses for their postcode, usually because of gaps in the GB data set that we have access to, or if they are unable to find their address in the list (e.g. they believe they live at 'Flat 1', but the only address listed is 'Ground floor flat' due either to errors in the GB data or a difference between the customer's door number and Post Office data), they will be prompted to manually type out their address. In addition to their address, we are required to provide energy suppliers with the corresponding MPAN and/or MPRN as appropriate to a customer's switch. The GB Group data set we use to source meter numbers has meter numbers associated with roughly 90% of known addresses. Where we don't have a meter number then the customer will be required to find their MPAN/MPRN, usually from their bill, and manually enter this information to complete their switch application. We are not able to process switch applications without meter numbers. This will impact all other parties also dependent on the GB Group for ascertaining meter numbers. Having to manually enter a MPAN or an MPRN reduces both the likelihood of a customer completing a switch application due to them not being able to find the appropriate information, and the likelihood of an energy supplier being able to successfully process the customer's switch due to errors with the entered number. We have seen some cases, for example, where customers have performed a web search for an example meter number and entered this in order to complete an application. Finally, some suppliers require the capture of previous addresses for the purposes of credit checking and identity verification. In most cases, we capture up to three years of address history or two previous addresses. We use the same mechanism (customer enters a postcode then picks an address from a list) for these. A number of customers have previous addresses outside of the UK, and for these we have a bespoke process for each supplier. In all of these circumstances, the data we capture is only as good as the original source (GB Group) and relies on the customer picking their correct address or manually entering their address in a format recognisable by the appropriate energy supplier. In cases where the address is manually entered, we have found it difficult or impossible to validate that the data entered by the customer is 'correct'. Ultimately some customers have a differing opinion of what their address is compared to Royal Mail.
GTC	N/A
EDF Energy	A number of data checks are made once the initial registration of a supply is confirmed, including the address of the premises and the billing address. Mismatches between are flagged and, where appropriate, may be validated with the customer. Any resulting changes are then updated with MPAS and reflected in our systems once the D0171 is returned.
Northern Gas Networks	N/A
Xoserve Limited	Xoserve is not providing a response to this question
Money supermarket	Our 3rd party data supplier performs the data routines and quality checks on behalf of MSM. They triangulate the data between Royal Mail PAF, Gas addresses and Electricity addresses. Where a 3 way match is found, a single address record is created, containing MPAN and MPRN

	as well as other related industry information. When the customer chooses this address, the MPAN and MPRN is automatically captured on behalf of the customer. Where the 3rd party supplier cannot find a match for a property across all 3, potentially duplicate addresses end up being in their product and ultimately our underlying operational database. If the customer chooses an address where triangulation has failed, they are presented with the opportunity to manually enter the missing meter number (e.g. MPAN) during the application phase of any journey. NOTE: the 3rd party supplier also brings in data from other sources, therefore the processes described are more complex than detailed above. Further details of the processes performed can be provided if necessary. As part of the website journey, the customer can search for addresses using postcode only or a combination of postcode and house name / house number. The full address is presented back to the customer if there is a 1 to 1 record. Where there are multiple records returned, the customer can make a precise choice. The customer is provided with an opportunity to change the address record returned, however they are given no opportunity to manually enter an address.
UK Power Networks	N/A
ScottishPower	As detailed in answer 3.1, the address is validated upon receipt of a sale. Should an address be required to change throughout the customer lifecycle, the updated address will be updated on MPAS / Xoserve, again through the relevant flows (D0302 for Billing / D0131 for Supply / ONSUP / CMS query). As with industry standards, any discrepancies with the address will be notified to ScottishPower from the central systems, and manual intervention would be required to establish and resolve the discrepancy, where applicable. Please note, any notifications from industry that these addresses do not match their data are commonly overridden, as explained in 3.1.
Scotland and Southern Gas Networks	N/A
British Gas	The 'Customer Journey' is at a high level representative and accurate. We have different means of capturing and triangulating customer provided address and meter point information, based upon the channel through which the customer chooses to sign up for energy products. This will be a combination of system level validation and manual triangulation / exception processes to ensure that information provided through the sales channel at point of sale is accurate. We also make provision for consumers who are unable to locate and provide their meter point numbers through manual processes via which we will source the information directly from industry systems or via further contact with the customer. Unless we are able to match a customer provided supply address to an existing PAF valid address within our database, we will always invoke follow up processes through which we endeavour to validate the information provided, whether through further customer engagement or interrogation of industry systems or QAS applications.

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.

Respondent	Response
National Grid Distribution	N/A
SmartestEnergy	We check the customer provided address against ECOES address to highlight any discrepancies.
Northern Powergrid	N/A
Power Data Associates Ltd	N/A
ESP Utilities Group	N/A
ESP Electricity Limited	N/A
Scottish Power Energy Networks	N/A
GB Group plc	GBG provides a consolidated MPAN/MPRN database to the industry through its Utilities Register web service and this is integrated into the public-facing web-sites and internal systems of several of the switching service providers and energy retailers. GBG provides this software together with an implementation guide which includes recommended 'best practices' to help minimise the chances of incorrect address capture and reduce the risk of erroneous transfers. This guide simply provides advice and does not enforce a particular route through the customer journey: The web service allows the switching service provider to design the interface as required to suit their particular business processes. A 'standard' method for capturing consumers' details is to ask for a postcode and to call an online service to populate a pick-list of properties for the postcode. Such services often use

	Royal Mail's PAF for the postcode/address reference but may run into problems because: • PAF contains only Royal Mail delivery addresses rather than all gas and electricity supply points; • PAF may hold a different version of an address to that known by the user and to that on ECOES/SCOGES; • PAF may not hold all details such as flats: A user may pick the 'parent' building because it is the closest match but this may of course contain several supply points; • The postcodes on PAF may be different to those for the same addresses on ECOES and SCOGES. When using GBG's Utilities Register, the switching supplier has the ability to offer a more flexible search facility for the customer including: • a pick list of properties from ECOES, SCOGES, PAF and from address data taken from electoral roll; • the ability to search on the PAF postcode as well as the original postcodes as held on ECOES and SCOGES (which may differ from PAF); • the ability to provide 'drill-down' searches on combinations of any of the other address elements such as street and town, building and street; • the ability to search on MPAN, MPRN or meter serial numbers; • the ability to retrieve associated MPAN, MPRNs, top-line data, GSPID and meter data where the selected address has originated from ECOES and/or SCOGES. GBG advises its customers that these features are available through the Utilities Register and we are aware that some agents implement some of these options within their own services to minimise the risks of erroneous transfers. However, we also appreciate that the customer journey needs to be as simple as possible and that offering too many search options can be overwhelming to an end-user and thus detrimental to the customer experience, the result of which could be to deter consumers from switching.
UCL Energy Institute	No response
Switch Gas and Electric Limited	We verify the supply address against the royal mail database as the royal mail database does not match the MPAN/MPR registers this means that in 10-15% cases we are unable to match the MPAN/MPR and we ask the customer to provide it from their bill.
First Utility	Customers that switch energy supply directly through our website enter their postcode and choose the address from the list of properties associated with that postcode. We use address information from industry sources. These requests are still validated through our dedicated service team and necessary data flows sent to industry. We understand that switching websites typically use the postal address format ("PAF") to validate customer information. In our view, this is one of the the biggest cause of switching errors. For example, these switching requests (consisting of PAF addresses) are sent through to our operational teams for validation. We attempt to resolve any ambiguity in address data without the need to contact customers. Where we do speak to customers directly, we attempt to confirm MSN's, MPRN, MPAN to ascertain the correct supply point. We have received feedback from some customers that the old supplier is not willing to amend some customer data before the switching process commences. In these instances we have to send what effectively amount to confirmations for spurious information to attempt to secure corrections.

	We find the need to use these additional processes and workloads creates inefficiency and adds unnecessary risk to achieving a smooth customer journey
Western Power Distribution	N/A
Flow Energy	If a customer signs up themselves via the our white label the address is picked from a list provided by a commercial 3rd party PAF database which auto populates the customer also confirms their MPAN/MPRN (this is auto populated but can be manually entered by the customer if the auto population fails or the data incorrect. If the process is performed by telephone our agents can also check the MSN via ECOES/Xoserve Data Enquiry to provide full triangulation. In cases where the customer comes to us via a comparison website, we don't have the ability to verify the data. As a result we have seen large increases in poor data quality during the periods where we have allowed direct switching via them.
Fulcrum Pipelines Limited	N/A
Utilita Energy Ltd	As stated in our answer to 3.1. We look to compare customer led data with industry data to ensure a match before continuing with registration. This of course doesn't negate all E.T's as it is perfectly possible for the data to match and both be wrong but it does reduce the issue. Mismatches are flagged and manually rectified where possible. At point of sale we will always gather the address from the customer and endeavour to gain meter IDs to match against industry data as an additional layer of validation. As previously stated where these mismatches occur it will fall into the exceptions process. The Registrations team will look to contact these customers by telephone on multiple occasions to clear up any ambiguities in data. If the customer is uncontactable after several attempts then the registration will be cancelled and a letter sent to the customer explaining this.
Electricity North West Limited	N/A
Switching/price comparison service 1	The postcode and address on the switch page is prepopulated with the information entered on the first page form. Beside this question the user is advised to ensure that the address is correct, and change it if necessary.
SSE Energy Supply Limited	When a successful sale is loaded, the registration details are prepared by our system. Reports are produced which highlight potential address mismatches intended to prevent any unnecessary Erroneous Transfer (ETs). Further rectification work is carried out at this early stage of the application where necessary. The software used within the Autoload process is not real time and therefore the addresses used can be out of date if a subsequent update has been made and these changes have not yet been reflected. This can be caused where addresses have been updated from the customer request however the databases have not been updated to reflect the changes. It would

	therefore be beneficial for the database records to be sent and updated more frequently. SSE is actively pursuing this for the gas databases through SPAA. This will ensure that there is a reduction in the comparison of old inaccurate data, to help potentially reduce Erroneous Transfers. Additional reports have been created which break down the records by fuel type; these reports check the Supply number and compare it to the address provided within the National Databases. If during these checks, the correct address cannot be confirmed then attempts will be made to contact the customer to confirm the correct details have been captured. Triangulation failures from a Verbal sale should be significantly reduced since the advisor should be able to resolve any potential mismatches before the contract is agreed and loaded. When online applications are processed, but the Supply Number is not identified, further work is completed to progress the application. Where there is a mismatch of information attempts will be made to confirm the details as required. In order to identify the correct details, addresses will be matched using the National Databases which will enable the correct identification of the relevant Supply Number. Further details are requested such as the Meter Serial Number and/or MPxN to enable the advisor to further check these against the National Database.
RWE npower	Please see our response to 3.1 for greater detail. For sites where ownership is not clear, we have a process of checking ownership/occupancy of a site through credit referencing software. This would match owners to addresses. **Npower Business process:** • Validation of service address out code (first part of postcode) against town/city and county. • Validation that MPAN/MPR provided has same address as ECOES / XOSERVE. • Contact with broker/TPIs in first instance of a mismatch to try and resolve directly or contact directly with customer to obtain MSN depending on channel. • Verbal confirmation from customer of MSN where we see more than 1 MPAN / MPRN on exactly the same address in ECOES / XOSERVE
E.ON	The information provided in 3.2 covers this section too.
Wales & West Utilities Ltd	Wales & West Utilities is not providing a response to this question
ElectraLink Limited	The structure of the DTN as an any-to-any message hub allows us to access the contents of the data flows transferred across the DTS with no degradation to security or performance. This provides us with the ability to validate the content of the flows. Certain types of validation are already available to DTS users. Syntactic validation is carried out on all electricity files sent via the DTS. This checks basic message structure and content at a data level to ensure that data files can be automatically fed into recipients' systems without causing IT related issues. Examples of checks carried out by syntactic validation are: • Data items are not longer than their definition in the catalogue; • Data items only contain characters from the valid character set; • INT data items only contain numerical values;

	• BOOLEAN data items are either 'T' or 'F' and in upper case; and • Groups are terminated with the carriage return character only. Any data file with one or more syntactic errors is rejected (not delivered) and the sender receives a negative acknowledgement. The onus is on the sender to correct the error or errors and resend the data. ElectraLink provides a number of tools to facilitate this process, including a flow editor which includes data validation. In terms of address data, this will pick up any postcodes that contain more than the maximum allowed characters. A series of enhanced validation options are also available on the DTS, under the control of the sending party, but the majority of these have not been switched on by most industry parties. These include: • Mandatory data items must be present & null data items must be absent. • Groups must occur in the correct order. • The correct number of groups must be present. • Child groups must have and preceding parent group. • Values must be taken from the valid set (where a valid set is defined). With enhanced validation turned on, it would be possible to highlight any flows where the address data did not meet the minimum standards of completeness set out in the MRA MAP 09 guidance. However, it would not provide any information on the accuracy of such information.
Money Saving Expert	If a user's postcode is not listed on the address look-up they are not able to manually register their address. When manually entering MPAN/MPRN, a user is only able to enter numbers on the switch application form. Validation is in place to ensure the appropriate number of numbers are entered and that the field is not left blank. Help text is available to assist a user in identifying their supply number from their bill.
switching/price comparison service 2	Where possible, once a customer has picked their address from a pre-populated list, we will automatically look up the associated meter numbers for that address based on data provided to us by GB Group. GB perform data verification and validation to ensure the data is as accurate as possible. As previously mentioned, however, this data is often up to six months out date compared to the data held in the master registers, and additionally will occasionally contain errors. Customers occasionally contact [switching/price comparison service 2] and point out errors in either their address, energy region or meter number and ask us to make amendments. We are limited in our ability to correct these errors, and have to wait sometimes up to six months for updates to reach us. Direct access to ECOES and XOSERVE would go a long way to mitigating these issues. In cases where we are unable to automatically source a meter number, the numbers provided by the customer will be validated against industry standard check algorithms. Sometimes a customer will pick the wrong address from the list. All of the most relevant information we have captured from a customer regarding their switch, including their address information, will be concisely summarised and highlighted to them in an email which is sent out after every completed switch. At this point they will have the opportunity to get in touch if they notice any issues with any of the information.

	In many cases where a customer has selected an incorrect address, they will contact us directly after completing their application. In these cases we will amend the stored address before sending the application details to their chosen supplier.
GTC	N/A
EDF Energy	Please see 3.1 and 3.2.
Northern Gas Networks	N/A
Xoserve Limited	Xoserve is not providing a response to this question
Money supermarket	MSM validates the customers' entry (postcode and house name / number) with the master data set supplied by the 3rd party supplier. This data is hosted by MSM to ensure any look-up is technically timely. The customer is provided with opportunity to change their address as part of the initial comparison and also during the application. When implementing address lookup, MSM were aided by the 3rd party in achieving best practices in terms of quality address lookups. MSM work closely with the 3rd party to ensure the address lookup is accurate and further best practice methods are adopted.
UK Power Networks	N/A
ScottishPower	ScottishPower validate all addresses against PDS (MPAS and Royal Mail), which is the route that is followed within our business processes, through a 3rd party validation tool. If these validation steps fail, the case in question would require manual intervention to establish the correct next steps to resolve the case, which may involve contacting the customer for additional information / clarification. ScottishPower employ a consistent approach when requesting information from customers to minimise ambiguities, which are detailed below. For direct telesales, ScottishPower would require the postcode, house number and, where applicable, the flat number/location of the property, which we would request from the customer. Once the correct address has been located, the meter serial number and MPAN/MPRN may also be requested to ensure accuracy. For web-based sales, ScottishPower would require the customer to provide their postcode, house number, the flat number/location of the property. This would be validated against MPAS and Royal Mail, as standard, through PDS Should this not match what is held within the industry records this will be highlighted through the relevant industry flows during registration, at which point manual intervention would be required before the registration can progress. For Broker sites sales, we require the MPAN/ MPRN, as well as the postcode and house number. If these do not match we reject the application back to the Broker.

Scotland and Southern Gas Networks	N/A
British Gas	We will initially attempt to re-use any existing customer record; I.e. We have supplied them before or we supply one fuel but not the other. From a sales call directly to British Gas the agents will have PAF/QAS validated addresses to choose from. If there are ambiguities then the Xoserve and ECOES web portals will be used to validate – and if necessary additional questions will be asked of the customer (such as confirm meter serial number). Upon the creation of a new record for a customer from a 3rd party sale the address goes through PAF validation, should the address fail this validation then an exception is created for an agent to manually verify the details. If we have not been able to obtain MPAN/MPRN at point of sale then we will obtain them either through the use of a previous record where we supplied the customer or by using the QAS system to triangulate the address data. If this is not successful then an exception is created. Initially the agent will attempt to rectify this by consulting the different systems available. If they are not able to resolve this then a letter will be sent to the customer requesting them to confirm the MPAN/MPRN from a previous bill. We will also try to outbound call the customer to obtain any outstanding information. These actions take place prior to us starting the industry registration process. Typically the information we would request from customers is: • Address • Telephone Number • MPRN/MPAN We would request additional information if there is discrepancies such as meter serial number.

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

Respondent	Response
National Grid Distribution	We believe it has captured the uses of UPRN and AddressBase and have nothing further to add.
SmartestEnergy	Yes
Northern Powergrid	We believe Section 4 does capture the use of the UPRN and the relevant licensing considerations.
Power Data Associates Ltd	Not familiar and do not use any commercial address products. If an agent or any industry party requires to purchase a licence for some £174k then this will be a significant barrier to entry for smaller industry players – suppliers and agents. A stakeholder with 174k customers during the year may incur a cost of £1 each per year to simply access the address data. It is not clear whether this fee is 'per year' – suspect it is - to continue to obtain updated to address data changes. The report indicates that a Distributor/GT licence may allow for the address data to pass on down the chain, yet this chain would be: GT – Shipper – Supplier – Agent (MAM) – sub-contractor (OAMI). Distributor – Supplier – Agent (MO) – sub-contractor It is not clear that the described licensing arrangements are sufficient. House/flat split. The report identifies that a house split into flats will retain the UPRN and new 'child' UPRNs will be created to identify the flats. On this basis an MPAN may remain for the landlord common services and each of the flats. Does a 'child' UPRN get created for the landlord? If not, do business rules become developed which mandate that the landlord supplies are associated with the 'house UPRN'? But I understand that the 'house UPRN' will become regarded as 'historic', so apparently no longer in use. Alternatively, if an existing MPAN that was associated with the house UPRN, and that MPAN becomes the relevant one for the ground floor flat, how does the MPAN become transferred from the 'House UPRN' to the 'ground floor flat UPRN'? Is this a role that Distributors will make happen when the property change occurs? There may not be any service alteration required so what is the trigger for the Distributor/GT to know about the change? Similar issues in reverse, split property reverts to single supply. Other scenarios could be a split in the property triggering a new child UPRN, but the physical supply point remains the same. So does the MPAN/MPRN become associated with both UPRNs?
ESP Utilities Group	Yes

ESP Electricity Limited	Yes
Scottish Power Energy Networks	Scottish Power Energy Networks believe that Section 4 captures the uses of the UPRN and AddressBase products, and also the current relevant license conditions
GB Group plc	Section 4 has essentially correctly captured the concepts behind the UPRN and AddressBase products. Whilst it is noted that the ADWG has identified regional variations in the relationships between local authorities and building contractors, and differences in the UPRN assignment processes, it implies that the procedures for managing UPRNs at local authority level and also within Geoplace/OS, are correctly followed for all property changes, including construction, modification, renaming and demolition. Having worked for many years with AddressBase (and its predecessor, the NLPG), we have ascertained that in the main, the address lifecycle is reasonably well recorded within AddressBase. However, there are a number of exceptions to this in that not all address changes are correctly captured for a UPRN. GBG has over time, seen significant improvements in the quality of the data within AddressBase and a reduction in the number of erroneous records. However, we would always recommend that any address management process making use of and relying upon AddressBase as a national property reference, should also include some exception handling processes to allow for any erroneous/incomplete property details. The key areas of concern include: • Sub-premises: Flats, apartments, units etc. not always included • Parent/child property relationships not always included or inconsistently represented • Incorrect postcodes for some streets and localities • Poor representation of UK businesses • Inclusion of plot/new-build information is poor • Regional inconsistencies; • Omission of non-mandatory data, such as 'level' • Incomplete UK coverage: No data for Northern Ireland, Isle of Man and Channel Islands • Significant time lag between real-world property changes and inclusion on AddressBase • 6-weekly refresh rate is non-standard and too infrequent. Most other address database changes areavailable monthly or daily. **UPRNs in the Registration Process** Most existing consumer registration processes will reference the address data behind ECOES and SCOGES, either directly through online lookup services, or via an extract from these databases. Many organisations, such as the price comparison web sites, will also utilise enhanced online services that combine the ECOES and SCOGES extracts with other address references such as Royal Mail's PAF and the UK electoral roll and which provides a more inclusive and consolidated view of the UK building stock. Section 4.7 of the consultation document states that there would be no requirement to pass the UPRN to other market participants to avoid potential licensing issues. However, it is

	believed that OS's current AddressBase licencing model would freely permit the appending of UPRNs to any other address dataset providing that the extra data offered by AddressBase, such as classification codes, grid references etc. are not also appended. It would seem prudent therefore, for the MPAN and MPRN databases to be matched to AddressBase Premium in order to apply the UPRNs and so create a UPRN-keyed, consolidated energy address database that could be made accessible to all market participants. Thus for example, a UPRN associated with a consumer's address can be provided at the point of customer contact i.e. when the end user selects their address from a switching agent's web site and passed through to the GT, IGT, DNO and/or IDNO.
UCL Energy Institute	It is a good summary of UPRNs, although we would suggest that particular care should be taken when handling parent and child UPRNs. In our experience it is essential to have a good understanding of this concept before tackling any (meter) address matching.
Switch Gas and Electric Limited	I do not have sufficient knowledge to answer this question accurately
First Utility	We believe the consultation has captured the uses of UPRN and AddressBase products sufficiently.
Western Power Distribution	Yes this seems to be a reasonable representation.
Flow Energy	No response
Fulcrum Pipelines Limited	Yes
Utilita Energy Ltd	Although the expense of this tool is briefly touched upon as potentially disproportionally affect smaller companies and new entrants I believe this is being downplayed. The figure quoted will be a large barrier to entry and reduce competition. The approach described in the document suggests one company will hold a monopoly on all UPRN matching services in the industry. This is not a healthy state of affairs and will potentially open the process up for a legal challenge in the future based on the monopoly it will hold. Other future services in the industry, for example DCC, are already coming under scrutiny for this monopolised approach and it therefore seems sensible to avoid this where possible. 4.5-'licensing considerations' talks around the ability for a distribution business being able to pass on the data to 3 other participants. What are the limitations then on the supplier to pass this data on further? As the supplier would of course need to pass this on to their own agents otherwise the potential improvement in data would be negated by an inconsistency in data across participants.
Electricity North West Limited	Yes

Switching/price comparison service 1	We haven't used UPRN or AddressBase previously so are not best placed to answer. However the descriptions of the current and potential uses of each package seem comprehensive. The cost of UPRN licences is an issue. As having a unique property identifier is essential for the upcoming smart meter roll out, and for mitigating existing address problems perhaps the DECC should make this information available through cross reference with supplier/TPI existing address and meter information, rather than suppliers and other stakeholders having to pay to look up this information also.
SSE Energy Supply Limited	It provides a good overview of the products available and the costs involved however there is not enough evidence to show how it will improve the on-boarding customer journey. The UPRN is used as an identifier for every addressable location. However there is not a defined explanation which fully describes this addressable location. There is also the serious question of justifying the licence costs against the scale of the current address data issues, to ensure an appropriately proportionate outcome. Further analysis would be required to confirm if there are additional savings to be made and if whether there would be any improvement to the customer journey. There is value in knowing that an MPRN and MPAN are associated at the same address without knowing the additional contents used within the AddressBase product. The UPRN would be beneficial for the SMART rollout to ensure gas and electricity meters are exchanged at the same time however, SSE remain unconvinced that this will have an appreciable benefit to the switching process. The substantial licencing cost required to facilitate the full use of the UPRN and AddressBase products may deter new market entrants and are likely to have a detrimental impact to smaller suppliers. There are approximately 176 registered gas and electricity suppliers on the Ofgem website and based on the licence cost for full use of the AddressBase products, the eventual cost would equate in the region of £30 million, which as with all additional costs, will eventually be passed on to the consumer. Without the full view of the benefits of using this product, it would be beneficial for the industry to negotiate a cross licence to help reduce the impact to smaller suppliers and reduce the cost impact to our consumers, if the UPRN is adopted. Suppliers deal with address changes on a day to day basis resulting from customer requests although the addresses are owned by the Distributor. Ordnance Survey take address amendments from the Royal Mail which we believe can take up to 8 weeks for their systems to reflect these requests. The UPRN address products will provide information about address changes every 6 weeks, therefore there is a potential risk that an address will not be changed for up to 14 weeks and within this time a customer may have requested a change of supply. There is therefore a potential risk that an increase in customer complaints will be caused unless the data is updated within a shortened timescale than above. Although the UPRN would be a common point of reference, its use will only be as good as the data which has been entered. Current address matching on the National Databases has enabled matches of 85% without the need for the additional cost of this product.
RWE npower	Overall, we feel that the consultation has accurately captured the uses of UPRN and AddressBase products. However, our business does have some concerns over the use of UPRNs, as they have stated that the use of UPRNs will have fewer benefits for business customers. Whilst in a domestic space, there may be a linkage between the land & MPAN, i.e. "1 door to 1 MPAN" type of

	relationship, then it is acknowledged there may be some benefit for the introduction of UPRN. However, for business customers, for example where access to a customer premises may be miles away from the stated MPRN (e.g. care taker holding the keys for a number of sites), then the use of UPRN is not enough to eradicate address issues. Furthermore, where a business premises covers a large industrial site, it is unclear how the UPRN may benefit location for the MPAN / MSN. Also, there can be more than one UPRN attached to a premise, e.g. UPRN for a main office, one UPRN for the factory, One UPRN for outbuildings, etc. This could of benefit to our agents when there are ambiguities around where the meter is located, although multiple UPRN's would be difficult to manage if the site has multiple UPRNs. The biggest drawback is that a licence for Addressbase from the OS is £174,000 per annum, which is quite high. An industry wide licence would be a good idea; however the bill for this would still be footed by the industry. With similar schemes in the industry, the cost has been split between the Big 6, which we believe disadvantages us, as smaller suppliers would still be able to access this system.
E.ON	In 4.4 the final sentence suggests that the developer allocates UPRNs in the initial planning application – since they are allocated by the Local Authority not the developer this is incorrect. In 4.5 Cost for provision of the PAF licence haven't been provided – despite making a direct comparison to the UPRN licence costs. It also doesn't appear to have been captured here that some of the GTs are already holders of the relevant licences and are using both the UPRN and AddressBase products in their businesses.
Wales & West Utilities Ltd	Section 4 articulates the use of the UPRN and provides a discussion on licencing options as we understand them.
ElectraLink Limited	We do not have a view on the licencing considerations. ElectraLink stores the UPRN from all electricity flows where this is used and DTS may search for data flows which contain specific UPRN values through Webtools.
Money Saving Expert	No response
switching/price comparison service 2	The assumption is that TPIs and other industry parties already have access to the AddressBase data set directly. As it stands, [switching/price comparison service 2] licenses their address data with the addition of meter numbers, and so would have to pay additional license fees for access to UPRNs.
GTC	We believe that the uses of UPRN and the associated AddressBase products required in order to unlock the UPRN have been captured in Section 4 at a basic level. We do not believe that the new connections process and the benefits or drawbacks of UPRNs in this process have been fully discussed however. As an owner of distribution networks that deal in the new connections market we harbour concerns that AddressBase will not, by itself, be a robust enough tool by which to cleanse any address data quality issues that arise from the new connections process. At the initial planning stage UPRNs are not assigned on an individual plot basis but a group of UPRNs are allocated to a development. Until the UPRN has been allocated against an individual plot (or postal address)

	there is limited use for the UPRN in the new connections process. Whilst AddressBase is a useful tool to cleanse existing data (subject to the drawbacks that have been highlighted in the consultation) we do not feel that the uses extend to provide benefits for registering new supply points and it is not clear within the consultation how AddressBase Plus and Premium may address this. We do not believe that the full extent of the licencing considerations have been captured within the consultation. Based on the possible requirements of business dealing in new connections to have a licence for AddressBase Plus or Premium (this is something that will require further investigation and confirmation as indicated above) we believe that it will be pertinent for the licencing costs of these products to be fully explored. We also do not believe that the extent to which a "single use" licence can be used across a business is fully discussed. It is unclear in the consultation if this will limit the licence to be used by a single licenced business or whether it can be used for several licenced entities within one business. For example if the requirement to hold an AddressBase licence is extended to suppliers then will suppliers with several licenced business be required to hold an AddressBase licence for each of them? This is an important consideration because it will drastically affect the costs imposed by the requirements to have an AddressBase product. This may have more of an impact in the electricity market as organisations with more than one Distribution Services Area have a licence for each whereas gas organisations that operate more than one Local Distribution Zone (with the exception of SGN) have a single licence. The consultation has not discussed the possibility of purchasing a licence for AddressBase on a geographically specific basis. This has not been discounted in the consultation and should be considered as an option. We note that in the past it has been possible to purchase other Ordnance Survey products on this basis and we would recommend that this is something that needs to be considered as it is likely that it will reduce costs for all businesses and customers. This may be less useful for suppliers as they are less likely to have supply points grouped neatly in a geographical location. However if this is not possible on a site specific level. We believe that the possibility of negotiating an industry wide AddressBase licence is also something that needs to be considered further. We believe that this could be negotiated under the provisions of an industry code and the costs of the licence can then be distributed among the participants on a per supply point basis. This will remove the cost disparity that will be particularly notable for smaller parties as they will be forced to allocate a higher cost per supply point.
EDF Energy	The description of licensing arrangements within the consultation document requires further clarity, specifically regarding terms of use of the UPRN. For example, if a metering agent were to receive a UPRN on a dataflow for one fuel and use that to match it with a record for the other fuel (i.e. using the UPRN as an address ID) would this count as 'use' of the UPRN in terms of licensing? Most of the benefit to be gained in dual fuel matching through use of the UPRN is more about this sort of matching across the fuels than it about using the information contained within the UPRN itself.
Northern Gas Networks	Yes

Xoserve Limited	Xoserve is not providing a response to this question
Money supermarket	An area which has not been considered is the customer impact. How will the industry prevent the costs being passed on to the customer? How will the industry be protected regarding standard contract terms and commercials when mandated to use a single data supplier – OS? A single underlying data supplier (OS) and therefore no competition could be a risk to the industry and the customer. Another area that should not be overlooked is the data quality of UPRN itself. There are times when address/UPRN changes are not always reflected in a timely manner by OS and various authorities. Early stages of building and building subdivisions are particularly problematic. OS should be able to provide more detail as would MSMs 3rd party address supplier mentioned above. The timeliness of any updates need to be understood and ideally managed to SLAs across the industry.
UK Power Networks	UK Power Networks has already taken the decision to utilise the opportunity the SMIP creates to tackle the difficulties and challenges of address data quality through the use of AddressBase and UPRNs. We have switched from PAF validation to the use of UPRNs and have undertaken the complex exercise of remapping our addresses, sending the UPRNs on through the industry systems (and ECOES), to help suppliers and their agents locate their metering assets and minimise the possible disruption to the customer. While the UPRN is not a perfect data set, it is a common single independent identifier for approximately 30 million premises. AddressBase is already being used by a wide range of organisations including local government, water companies and insurers. The benefits of the UPRN, to the SMIP, have already been identified as the DCC took the early decision to capture the UPRN within its systems. Given past experience, we would recommend data cleansing and UPRN mapping prior to the implementation of the CRS, rather than during the implementation stage of the project.
ScottishPower	Yes
Scotland and Southern Gas Networks	We believe that section 4 of the consultation captures the potential uses of UPRN and AddressBase products although we believe more work needs to be carried out to fully understand the licensing considerations.
British Gas	The consultation has captured the relevant licence considerations. However, the request that companies contribute and pay a licence fee to utilise what should essentially be open source data is questionable. British Gas has millions of records and so will be a huge contributor. If companies are requested to contribute then there should be a reciprocity agreement. Where no licence costs are applicable as British Gas and other companies will contribute to build the quality & coverage and therefore commercial value of these assets e.g. UPRN and Address base. It is difficult to make serious comment on Option B presented in the consultation as there is no clear visibility of costs involved. There is a legitimate concern relating to the cost of the licenses from Ordinance Survey and

	that this could drive an additional cost to the industry and be another barrier to entry for new market participants. A full and detailed impact assessment and business case must be developed to ensure that any proposals taken forward would deliver sufficient benefit.

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.

Respondent	Response
National Grid Distribution	The effects of poor quality address data on our business do not generally relate directly to issues regarding the customer switching process. As mentioned previously NGD use address data predominantly to carry out its own business processes, many of which require a site visit; if address data was incorrect or incomplete this could impact on our ability to attend site in a timely manner.
SmartestEnergy	We are not aware that this is an issue.
Northern Powergrid	Address issues we are aware of include but are not limited to: • inability to identify where postal address changes have taken place and subsequent update of our records; • legacy data with a lack of address detail and therefore inability to identify a match in Royal Mail; • creation of new connections/MPANs for plot addresses; • lack of provision of plot to postal mappings from property developers/local authorities; • suppliers associating the incorrect meter to the MPAN and updating the MPAN address in their system rather than resolving the meter issue; We believe suppliers are best placed to comment on the problems that may arise during the customer switching process. At present we employ 4 FTE's to undertake our address maintenance processes.
Power Data Associates Ltd	Crossed meters occur in gas and electricity. Although the report captures one scenario which infers an 'error' another driver has been a developer of a new site has a meter installer attend apparently for one premises, but now wants another property sorted as a priority, so he simply directs the operative to his priority property, possibly even stating that this is the premises he was asked to attend, but without any clear independent property identification (house number on front door or MPAN/MPRN labelling) the operative believes they are fitted at one site, when in fact they have been duped into fitting it at another premises. Only later when a customer is billed is the error identified as a crossed meter. In a similar way it has been alleged that the developer may ask a gas safe operative at site to simply move an installed meter to another premises to enable boiler commissioning or to enable a customer to move in. This is more likely with gas than electricity. The report indicates there is still an issue with plot and address identification so it is not clear

	how UPRN will assist with this issue. The labelling of cut-out and ECV (see Q6.3) will help mitigate this issue. The gas and electricity industries operate different processes for creation of new MPAN/MPRN. The electricity industry only allows an MPAN to be created by a Distributor who will therefore perform some checks that an MPAN does not already exist for that supply point. Whereas in gas a supplier who cannot identify the MPRN for a premises has the ability to create a new MPRN. This can result in duplicate MPRNs existing for the same supply point. For new connections I gather that gas UIPs are given a sequence of MPRNs to use for new connections, which may not at that stage be related to a plot or address. Not all these MPRNs will be used, but unless someone 'closes them down' they will remain in existence.
ESP Utilities Group	The most common occurrence of poor quality address data is where there is no postal address allocated to a plot. The receipt of plot to postal data for a site subsequent to CoS transfers may uncover ETs as a result of shippers acquiring supply points based solely on metering data (crossed meters). We do not currently measure the costs associated with processing address queries.
ESP Electricity Limited	The most common occurrence of poor quality address data is where there is no postal address allocated to a plot. The receipt of plot to postal data for a site subsequent to CoS transfers may uncover ETs as a result of suppliers acquiring meter points based solely on metering data (crossed meters). Poor address quality could have an effect on our emergency 24/7 response timescales (regulated by the industry) when a customer calls in to report an 'off supply' issue e.g. the customer advises that they have an outage at 'Plot 1 High Street' and ESPE arrive on site at Plot 1 and that property's customer has no issue with their supply. This would happen where the developer has changed the layout of the development and not updated the distributor. In some cases, particularly when the supply failure is with one service cable feeding one property on a network, it may be difficult to determine the exact location of Plot 1 and ESPE fail their regulated service levels as a result. The effect of poor address quality could have a negative impact on the customer e.g. in a crossed meter situation the customer would be prevented from switching as their address would not match that currently held on ECOES. Also with customer billing, in a crossed meter scenario, the customer would be billed for another customer's usage. We do not currently measure the costs associated with processing address queries.
Scottish Power Energy Networks	Common causes of poor address data quality are as detailed below: • Development changes during the lifecycle (plot to postal changes) • Change of use – update failures on Industry systems • Cosmetic Address changes – e.g. From number to house name • Flat location naming conventions – supplier updates may request update to conventions not in line with those initially set up – e.g. from Flat 2/1 to Flat 2F1 • Inconsistent address formatting in the data fields We believe that the issues above are the main contributory, and that while this is not an exhaustive list the ones listed would account for the majority of sites. Effects are generally felt by suppliers in the COS process, however one of the main effects we have identified recently is the Industry inability to correlate MPAN numbers directly to

	properties resulting in suppliers requesting MPAN creations. In some instances we have been able to locate either an existing live MPAN or an existing 'disconnected' MPAN that can be resurrected. These volumes equate to 0.1% of the total MPAN requests raised YTD, which is not a large volume, but raises an issue in the quality of data as a whole. We are unable to quantify the costs that we incur in processing address queries, as many form part of our (semi) automated process, we are not able to distinguish which ones would be attributable to erroneous transfer of other reasons that would adversely affect the customer transfer process.
GB Group plc	**What is Address Quality?** When discussing address quality it is worth first considering what is required to make a 'good' address. An address is purely an information tag and does not itself 'define' the property, in the same way that a person's name does not define them but is purely an identifier: A person may be known as Bill to his friends, William to his parents, Mr. Smith to his bank manager and Dad to his children. Likewise a property's address may have multiple forms throughout its life including a provisional, a (current) 'approved', multiple historical, and multiple alias versions. The main requirements for an address are for the delivery and collection of mail and other items, connection and registration of services, a locational identifier for a property's occupants and visitors and also as an identifier to easily distinguish it from other premises. An address must contain enough information to ensure that it is fit for purpose and this too will vary depending upon the requirement: Royal Mail as a minimum requires some building or business name information and a postcode but is still able to deliver mail without these elements if there is enough other data. Some hard-to-find properties may require extra directions in addition to the address ("third house along the track opposite the 'phone box"). The *quality* of an address is therefore a measure of the quality of information it contains in order to fulfil its requirement. In general though, it can be defined by how well it matches to a standard reference such as PAF or AddressBase. Although such databases are taken to contain the 'official' forms of addresses, even these may differ to the versions known by some organisations and to the property occupants. It is therefore acceptable and arguably preferable for an organisation to hold multiple forms of its customers' addresses where they exist, as long as the information for each version is correct. *Poor quality* address data could therefore be defined as that which: • Does not fulfil its requirements and inhibits or restricts a process such as switching supplier; • Cannot be matched with a high enough degree of confidence to a standard address reference. There is also a level subjectivity concerning address quality. For example, addresses within the MPAS database such as "Basement Flat", "Ground Floor Flat" and "First Floor Flat" at Princes House, may be technically correct, are supplied and billed by energy companies and can adequately receive mail yet cannot be matched to a reference such as AddressBase which may hold addresses for Princes House as "Flat 1", "Flat 2" and "Flat 3". Both versions of the addresses are arguably good quality yet represent different identifiers for the same properties. The problem here then is not so much one of address quality but in the inability to confidently match addresses from two sources which means that the attributes from one source (UPRN, grid reference, property classifications etc.) cannot be linked to those of the other (MPAN, meter serial number, meter type, grid supply point ID etc.)

Causes of Poor Address Quality

Section 5 of the consultation document discusses address quality issues and recognises that poor quality data is a major contributor to erroneous transfers. This is indeed true although some of the causes listed, such as "use of multiple addresses" cannot be solely attributed to poor quality data but rather to unmatched, yet maybe good quality data.

The types and causes of address data quality issues referenced in the consultation document are discussed in detail below.

Inconsistent gas/electricity formats	In agreement that this is not a significant issue.
Inconsistent gas/electricity address contents	The inability to confidently match gas and electricity addresses together will create an issue. The level of matching quoted by DECC seems a little high for the matching the ECOES and SCOGES data at premises level (e.g. individual building or flat). GBG believes this figure to be nearer 90%. Our experience is that the supply point addresses held by retailers is usually better quality than that held by DNOs and GTs and so higher match rates could be achieved if this data was shared across the industry. In general, higher match rates will indicate lower confidence of the matches at the 'top-end'. For example, matching "31 High Street" to "The Chip Shop, 31 High Street" would be a low confidence match (even in the absence of other data) in the same way that matching "31 High Street" to "Flat Above, 31, High Street" would be.
Incomplete address data	Although contributory, this is a minor cause and will only affect a small percentage of records with the exception, as mentioned, of plot-to-Postcode issues.
Plot-to-Postcode issues	A significant number of legacy addresses (for properties built many years ago) as well as new-builds are affected by this issue. The main if not the only reason for this is inadequately implemented and/or poorly followed procedures during property construction and registration, mostly caused by lack of communication between the parties involved. There are likely to be large regional variations across the country due to the differences in procedures adopted by different local authorities and construction companies. Likewise, there are also likely to be variations over time as process control improves (or degrades) as a result of increased (or reduced) funding for address management and planning budgets. This is an area in which process change instigated by industry guidelines should be adopted. Such processes are complex because of the involvement of so many different bodies including construction companies, independent builders, local authorities, Royal Mail, Ordnance Survey, Land Registry, DNOs, GTs and energy retailers small and large. The issue can therefore be broken up into two discrete problems:

	• Resolving legacy P2P issues • Tackling new and future build processes Both of these are discussed in greater detail below.
Historic churn and timing of address updates	GBG receives between 3,000 and 6,000 address changes from Royal Mail every day. This equates to changes to around 4% of the total property stock of the UK per annum. If these updates are not reflected within registration systems, then it is inevitable that address issues will arise. The procedures required to reduce the effects of this issue, are not particularly hard to implement for DNOs/GTs and retailers. However, whilst PAF changes are made available on a daily basis, there may still be a significant lag between the change occurring in the real world and for it to appear on PAF. This is exacerbated with AddressBase because OS currently releases updates on a 6-weekly cycle.
Crossed Meters	Our experience shows that the impact of crossed meters is small. However, the issue has been recognised and GBG has seen examples of MPRNs and MPANs at incorrect or non-existent addresses both in the case of multiple residences (the scenario of a block of flats with meters in the basement) as well as with detached properties whose MPANs on ECOES are associated with properties in a different street. The resolution of these is essentially a dedicated and slow process involving the manual capture of meter details to instigate a meter-to-associated-property investigation.
Use of multiple addresses	This has been discussed in 5.1 above and presents one of the most significant causes of address-related, switching problems. This is particularly prevalent with the following property classifications: **'Sub-premises' such as flats and apartments** These represent the area of greatest concern because of the inability to match gas and electricity addresses together and which can be underlined by the following, and not uncommon example: *26 Welltrees Street, Maybole, KA19 7AW* *MPRN data (SCOGES):* Flat /2, 26 Flat 1/1, 26 Flat 1/2, 26 Flat G L, 26 MPAN data (ECOES): Flat D, 26 U L, 26 U R, 26 UK Electoral Roll: Flat Ground 1, 26 Flat 1/F, Right, 26 PAF and AddressBase: Flat A, 26 Flat B, 26 Flat C, 26 Flat D, 26 **Businesses** The dynamic nature of businesses together with non-

	standard address naming, ranks them as possibly the hardest of premises to match. Organisation names are regarded by some as a separate address field, by others as a building name part of the address and by others as an attribute. "Rose and Crown" may appear as an organisation or as a building name, both with or without an accompanying building number. Likewise with working farms. Other businesses may be represented in a number of different forms: "Jones and Son (Butchers), 25 Acacia Avenue" vs "J Jones Ltd, 25 Acacia Avenue". An MPAN may be registered just at 25, Acacia Avenue. **Property Aliases** *19, Woodfield Hill, Coulsdon, CR5 3EL* **PAF:**19 Woodfield Hill **AddressBase**: 19 Woodfield Hill and Cromdale, 19, Woodfield Hill (alt. addr.) **MPAN data (ECOES):** Cromdale, 19 Woodfield Hill **MPRN data (SCOGES):** 19, Woodfield Hill Matching Cromdale, 19 Woodfield Hill to 19 Woodfield Hill could be potentially erroneous in the same way as would matching "Annex, 19 Woodfield Hill" to "19 Woodfield Hill". Rules can be introduced when matching such addresses which could try and 'sweep up' un-match MPAN and MPRN 'residues' from a previous matching pass, although these may well introduce further false-positive errors for exceptional cases and these are almost impossible to detect.
Poor quality or ambiguous data provided by customer or switching site	Switching sites will invariably utilise PAF and/or GBG's Utilities Register (a cleansed combination of PAF, ECOES and SCOGES) as their address reference. Some will not allow progress along the customer journey without a postcode and will only let the consumer select a property from the pick-list, which may or may not have associated supply point numbers. In cases where the address is represented differently on the MPAN and MPRN files, the user can only select one address even though they may see both versions of their address listed. On other occasions, 'non-PAF' addresses are not listed because the 'PAF postcode' cannot be determined. In such situations, the user may select the address closest to their own without realising that it belongs to a different property. In the real-life example below fed back to us from one of our switching site clients, the occupant at "Moor Farm" (not listed correctly on ECOES) inadvertently switched one of their neighbours because they didn't know which of the properties to select. Note that in this example, the real building names have been changed to meet with our client confidentiality obligations. The pick list presented to the user for their postcode

	contained amongst others, the following properties which appear on either the MPAN (elec) or MPRN (gas) data files as indicated below: Fell View Hall, Moor Farm (elec only) Fell View Hall (elec & gas) Moor Farm House (elec & gas) Moor Farm Cottage (elec & gas) Moor Lodge (elec & gas) Moor Lodge Cottage (elec only) Lodge Cottage (gas only) Tithe Barn, Moor Farm (elec only) Tithe Barn (gas only) Small Tithe Barn, Moor Farm Barns (no supply points)
UCL Energy Institute	The first problem is when the incorrect postcode is used. We can overcome this but it incurs extra (computing) time. The second big problem we hit is the use of text (usually in subbuilding field) that whilst it will help someone reading the meter, it is not officially 'address' text. For example: "Rear of" 5 High Street "BUNGALOW AT REAR" 56B Main Street 'TOP THIRD FLOOR LEFT SIDE NORTH' 3 Some Street or even: 'BASE FLAT LEFT NEXT TO NO 6' 4 Another Street Fitting or matching this sort of 'free text' to BS7666 compliant addresses (UPRNs) can be very tricky.
Switch Gas and Electric Limited	The most common cause is that the royal mail database does not match the MPAN/MPR register and therefore the customer's supply address will vary between the 2 which can cause confusion. The cost of this can be attributed to customer service staff who need to contact customers to resolve such discrepancies.
First Utility	One of the key issues with address data quality is the conversion from plot to postal. Developers do not seem to engage closely with suppliers once meters are attached to supply points. Site changes, e.g. when plot numbers are converted to house number and street names, are not well communicated, which can cause crossed meter information. Developers also do not always update postcodes accurately. This can have significant effects on erroneous transfers. Further, these issues impact our ability to produce an accurate invoice to the customer. This can result in significant costs to suppliers, e.g. when they need to conduct site visits to resolve disputes, as well as causing inconvenience and potentially concern and distress to customers. As mentioned in previous answers within this response, we find that switching sites using a different address format can cause our operational teams to experience a range of material issues which need to be resolved, where the underlying cause if address data discrepancies. This adds significantly to the cost to serve, including in terms of additional resources, and training for staff to manage the errors. All industry parties should be responsible for managing and updating address data in an efficient manner within a defined period from notification and held accountable for any failure

	to do so. The current situation only serves to highlight this break down in the industry.

Western Power Distribution	**Causes**
	• Inaccurate address updates from Suppliers.
	• Plot to Postal Discrepancies.
	
	Effects
	• Suppler Updates – Applying incorrect Supplier updates could lead to erroneous information being applied to MPRS, other WPD systems and ECOES – Given some problems experienced in the past with Supplier updates WPD check every update to ensure its accuracy.
	  ○ When addresses are verified they are then applied to the MPAS database.
	  ○ If any problems are experienced and the suggested address is not applied Suppliers are notified for further investigation to be undertaken.
	• Plot to Postal.
	  ○ From a DNO perspective the main impact once the error is identified is the amount of effort required to rectify the problem.
	  ○ In addition some problems can be experienced during network outages/customer enquiries when trying to locate customers if addresses are inaccurate.

Flow Energy	**The causes of poor address quality are:** Delays or errors in updating Plot to Postal addresses Inaccurate or inconsistent manual updates Auto population between systems with different address formats Delays in updating databases after and address/property change Inaccurate/outdated descriptive addresses Similar or ambiguous addresses where systems have transposed fields (e.g. flat number with property number) Property access point differs to address (e.g. access via an adjacent street at rear of property) **The effects of this poor data are:** ET's Crossed meters Lack of reads (including opening COS read) Each supplier providing reads from different meters in the COS process Disputed bills if the address differs from the customers expectations Potential errors during site visits/works Excluding customer compensation or write-off these issues cost approximately £10 to resolve for each instance.
Fulcrum Pipelines Limited	Incorrect plot addresses provided originally. Postal address not provided as soon as known. Developers moving meters from recorded location to meet ownership requirements. Plumbers not connecting to correct meter causing crossed meter situation (generally Flats). Poor or inaccurate address quality needs system investigations, cross business consultations and site visits to clarify installations. Approx. cost implication - £5k - £10k per annum.

Utilita Energy Ltd	The most common effect of poor address data are erroneous transfers themselves. The 2 most common issues with address quality are the following: • The two industry registration databases (GT and MPAS) have discrepancies between the 2. • Complex addresses. The best example of these are often found in Scotland where it is very common that the customer is not aware of every line of their own address due to the complexity. This complexity can also often cause the mismatch explained in the previous point.
Electricity North West Limited	The Electricity Supply switching process through the D302 dataflow quality Different address standards across different companies Human error / typo issues The most significant impact of poor address quality is on our ability to communicate effectively and pro-actively with our customers
Switching/price comparison service 1	**Out of date PAF data** The Royal Mail sends us updated address information every three months. Given this interval there is potential that new build homes could not appear in the database. We have had examples on our insurance comparison systems where a user has been unable to find their new build home using our address lookup. In these cases we can advise the user to confirm their address with their chosen insurance provider directly. The process is not as simple for energy comparison as the switch happens directly on our website. **User inadvertently entering a postcode incorrectly or selecting the wrong address** A user could accidentally mis-key or select an incorrect value when asked to indicate their postcode and address on our form. We have no way of mitigating this issue as we will not know where a user lives, save for where they tell us. This leads to a risk of erroneous transfers. **Completion of switches** We do not currently look up MPAN or MPRN numbers and send these to suppliers. At switch stage we send suppliers PAF information and in most cases meter information that a user has submitted to our website. There is margin for error here with regard to user entry, but this can usually be resolved by supplier triangulation. Just noting here since any issues the suppliers face at this stage affect our business processes if an address cannot be successfully identified or if an address is identified incorrectly.
SSE Energy Supply Limited	ET Analysis shows the main problems experienced are not due to the quality of National Address databases In the case of new builds whereby a plot is allocated, there is significant risk that the data chosen is incorrect. This can be caused by crossed meters, where incorrect information is listed for each meter point. Additionally, the customer can choose the incorrect address which does not match the information that is held on industry databases. Customers moving home are often moving into new builds so there can be many plot no/house no mix-ups, either where the customer gives a plot number instead of their house number or it has been set up incorrectly during the New Connection stage of the process. The customer may also give the wrong address completely. Sometimes the new house they are moving into

	has an entirely different address to what they have provided. Our systems link to PAS which searches for sites, their related supply numbers and matches them to the detail provided. The address formats are not always the same and it can lead to confusion over addresses, especially if the PAS data does not match the existing fields and they have to be amended. The information in PAS is updated periodically so is never totally up to date at a point in time. We also use PAS data when gaining supplies which we send on to sales systems, however, this uses a different version of PAS and often finds alternative supply numbers and in turn, the wrong sites can be loaded. There is also the potential that a customer will use an internet comparison site where they may select an incorrect address (e.g. that for a neighbour) to see if the prices they are quoted are competitive, the customer may then choose to continue with the registration, thereby registering the incorrect address. Ideally address data should follow a single standard format to ensure there is no ambiguity. In June 14.8% of our ET Gains were where multiple addresses from internet applications were presented for a single premise and using all available information, the number of addresses presented could not be reduced.
RWE npower	Please see below for our Domestic, Npower Business and Npower Business Solutions team's responses to this question. For the overall business, the true cost of poor address information is unknown. **Domestic:** The root causes of poor supply address information is Industry flow data for Domestic because this is the sole source. Npower Business: • Address in ECOES not matching address provided by customer – even after confirmation of MPAN / MSN – addresses do not seem to be updated once errors are found with them. Process for fixing these is not set up to accept updates at point where they would be discovered. Effect of poor address details is mostly experienced by meter readers since we use billing / customer address rather than service address mainly. But main impact would be failure to receive post regarding the location. Address fields should have a length that is limited to that which can fit in an envelope window. **Npower Business Solutions:** • The main source of address quality issues is industry data held in industry central systems, for both power and gas. The most common effect is the increase of erroneous transfers. These can become long and drawn out and disadvantage the customer in regards to their billing, for example, the customer will receive a bill covering the entire period from their previous supplier (who should have retained the customer) and would be payable all at once. • Also when address information is supplied by the customer, there may be issues associated with third party intermediaries who act on behalf of customers, where incorrect address details are captured, and/or change of occupier information is not accurate. • Returned Mail. – Incorrect address data could mean our invoices are returned, and remain unpaid. This may hamper customer's attempts to change supplier if the

	balance remains unpaid, but would trigger further investigation, potentially delaying the transfer. • Failed appointments from agents, leading to GSOS payments. – Missed appointments for meter fixes/replacements/upgrades etc. Also affects the ability to take readings from traditional meters. • Increased costs. – Industry Costs, settling on inaccurate data. Increased re-work of workforce. • Mismatch of interested addresses – site address vs meter location address. Poor address information hampers all site visit activity, in terms of additional time to locate the right site, or even a failed site, causing re-work to find the correct address.
E.ON	The fact that an address can be populated in free text form into on-line switching systems can ultimately lead to the selection of the wrong MPAN or MPRN. One of the problems with on-line channels is that the websites don't always hold the address in the format that matches the PAF valid format, there can be additional fields used differently by various websites, but a common approach to the address population would assist in the translation of address between the on-line channels to our sales tools. As there is no governance which covers the provision of this information we rely on the goodwill of the switching sites to make any suggested changes. Using the on-line channel, the customer isn't always encouraged to provide their MPRN or MPAN in the switching process – it's possibly seen as too onerous (despite the fact that they are often in front of their home PC and the information is available on the customer's bill – including online bills), so we rely on customer provided information to match the address to an MPRN/MPAN. An element of user error is also inevitable – sales agents may mishear callers where the call quality is poor, and they may mistype or select the wrong drop down from the returned data in an address search. Customers in new homes particularly when central systems still record plot addresses may often give you what they believe their full postal address will be, but matching a postal address to a plot record (which may have changed during the development) can be very challenging until the postal address has matured and been updated into central systems. Customers going through home moves also give you what they understand their new address to be, but this can often be inaccurate or incomplete. Common errors include the wrong post codes or the wrong house/flat number.
Wales & West Utilities Ltd	Wales & West Utilities observes that the most common cause of poor address data quality is the use of plot addresses and newly created flats or sub buildings during the M Number creation process, as only limited validation is possible. Issues also arise on industrial and commercial sites with multiple meter points. The existence of poor address data quality is detrimental to an efficient Supply Point switching process with customers often contacting us for help as suppliers are unable or unwilling to help due to address issues Some address issues are caused by our systems. A PAF validated address may have up to 14 fields but we look to capture this in our SAP systems using 7 address fields meaning that once the address is passed onto another system the PAF format is at risk of being lost. No industry consistent processes to maintain addresses. Duplicate MPRNs created by suppliers due to poor address data.

ElectraLink Limited	As ElectraLink only sees the address data sent over the DTS, not the processes involved in capturing the information and populating the data flows, we cannot comment on the root causes of data inconsistencies. However, in 2014, we produced a white paper on data quality across the industry that demonstrated a degree of inconsistency between data that MPAS agents issue in the form of D0217 flows, and that exchanged between Suppliers and Agents in D0155 flows. In addition, a random sample of D0311 'Notification of Old Supplier Information' demonstrated 37% did not match the MAP09 standards for completeness. This level of inaccurate and inconsistent data is likely to be detrimental to the customer experience, as it can result in longer switches and more requirements to contact the customer to confirm information and, in extreme cases, erroneous transfers. We do recognise, however, that a change in address data content can be an improvement as well as a degradation. It can also impact the smooth operation of other industry processes. For example, the research carried out in producing the white paper suggested that inconsistent address details is a direct cause of failed meter readings, which can impact both the COS process (if not getting customer reads), and also the billing experience as it could lead to inaccurate estimated bills.
Money Saving Expert	The most common effects of poor address quality are: • delays to a switch completing • switches being rejected by a supplier • properties not being switched / a neighbour's property being switched / erroneous transfer process being required. These issues damage confidence in switching. Consumers may face longer periods on more expensive tariffs or miss out altogether on cheaper tariffs. The erroneous transfer process can be long-winded, and where a consumer is looking to change suppliers it can lead to consumers being returned to a provider who they no longer wish to be supplied by. Where consumers change their meter type, there is often a time-lag in the ECOES database updating, which blocks the consumer from switching. Any solution using a UPRN would need to ensure the following: • Source data and feeds are updated regularly (ideally automatically) to ensure all property changes are captured. • Clear responsibility and escalation process for consumers who identify that their property information is not accurate.
switching/price comparison service 2	We have found the address data we license from GB group to be generally reliable. We still have a number of issues related to addresses, however. The first occurs when a consumer wishes to perform a comparison in a postcode area which straddles two energy regions. As a postcode can cover around 15-20 properties, wherever there is a border between energy regions there are often a number of properties which could be in one of two regions. In these cases we make a best guess as to a customer's energy region, but in a small number of cases, choose the wrong energy region, which can result in a customer receiving incorrect information. We could mitigate this by asking for a customer's address before they complete a comparison, but feel that requiring all customers to provide this level of personal information to help a very small minority of customers will dissuade a significant number of people from running a

	comparison. Moreover there are occasions when the wrong meter number is assigned to an address, or the address listed does not match the address the customer believes they are attempting to switch, in which case they will often pick the wrong address from the offered list. This is common with new build properties which may be assigned a plot number before they are assigned a building number. As we have to wait a significant amount of time for updates to percolate down to us from ECOES or XOSERVE, these addresses are often listed long after a new build property has been completed. In some of these cases, the customer will choose to enter their address manually. The translation from a manually entered customer address to the format required by some suppliers can be problematic; we rely on the customer entering a correspondence address in line 1, line 2 etc. format. On occasion they will enter their entire address on one line, which makes automatic identification of, for example, thoroughfare challenging. Additionally, some suppliers have overly restrictive technical requirements on the contents of address fields, for example, disallowing commas or apostrophes from addresses. This then requires either automatic or manual amendment of addresses before the data is sent to the suppliers. This process is both costly to us as a business and can also occasionally lead to errors. There is little consistency in the types of addresses suppliers capture, which can be confusing for some customers, as they will be asked for different information based on which supplier they choose to switch to. For example, some suppliers do not have a provision in their batch file for a customer's billing address being different from the supply address, which can further complicate the customer's onboarding process. In cases where a customer's address does not match the meter number held on file, and the new supplier then performs triangulation and notices the error, the switch application will be rejected back to us. We will then call the customer to explain their application has been rejected and attempt to collect more information to correct the data mismatch. Whilst we attempt to call a customer up to five times to correct this error, our contact rate remains around 70% meaning in many cases it is not possible to correct any errors. In some cases, the rejection is due to incorrect industry data, which we are unable to address, causing a significant barrier to a customer wishing to switch. In most cases, however, the switch will simply be cancelled. One of the major causes of customer rejection after the switch application has been completed on [switching/price comparison service 2], but before the energy supply has been transferred, is a customer failing a credit check. Often this is caused by incorrect previous addresses, which may not be in the UK. In our experience this leads to significantly more customers having their switches rejected compared to supply address errors. Ultimately, it's in the interest of TPIs to ensure that data is as accurate as possible, as commission is not due in cases that a switch fails to go on supply, which is often the case when the address data captured is incorrect. Further, we are obviously keen to ensure a customer's switching experience is as smooth and positive as possible - both for the online application process and the actual transfer process - so that a consumer feels confident in switching again in the future, or makes a positive recommendation to others. All the potential issues raised above will limit this. A customer not being able to select the correct address from a prepopulated list or having to enter an address manually will cause a minor frustration in the ease of the process. More significantly, errors in

	the actual transfer process are often difficult and time-consuming to rectify for consumers - not only will they not switch again, the experience is also likely to have a negative impact on their view of the industry as a whole. Our research has found that "too much hassle" is the most frequently quoted reason for not switching and any diversions from a switch 'happy path' just reinforces this feeling for the majority. This is not helped by switch horror stories that continue to reach media outlets, often relating to an address mix-up, which introduce fear and distrust in consumers.
GTC	The most common cause of address data quality within our business is when a developer alters the plot-to-postal (this may be for several reasons outside of the transporter/distributor's control) and we are not made aware of the change. One of the main concerns with this is that the issue with quality of address is not always noticed until later in the property's life. It is possible that this will cause erroneous transfers and crossed meters as the address that we have listed on our system is linked to an MPRN or MPAN which is actually at a different postal address. One of the issues with our gas address data is that currently if the address data that is in our system (which is the master address data) differs from that which is in Xoserve's system then we are experiencing issues with suppliers refusing to accept the address data that is on the GTC website. This has been causing issues with transferring customers in these instances.
EDF Energy	There are a number of common causes of poor address data quality, including: • Out of date address data, e.g. aged plot-to-postal address updates. • Manual error, originating in part from the customer at the point of entry into the contract. There are issues with address data quality both in regards to the data provided to us by customers, often via switching sites, and with the industry data set against which this data is compared to determine the MPAN/MPRN. Different switching sites collect address information in varying formats which makes matching these to industry data more complicated. Switching sites do not typically request additional information from customers that would assist to identify the correct supply, such as MPAN/MPRN or meter serial number. Poor address data quality is a significant contributory factor in the selection of an incorrect MPAN/MPRN and the biggest cause of erroneous transfers is where an incorrect MPAN/MPRN is selected for the registrations process
Northern Gas Networks	There are a number of causes of poor address data: 'Plot to postal' is a common issue experienced by all industry parties and is a topic of frequent discussion whenever the use of UPRN is suggested. The plot number of a house often bears little relation to its final postal address number and it is vital an MPRN is allocated at an early stage in the planning process. This results in MPRNs being assigned some time in advance of a final postal address coming into place. The processes for updating plot to postal will differ between utility infrastructure providers. NGN carries out a check to ensure that all completed project in internal systems do not hold only "plot address". Furthermore, sub-division or merging of properties should result in address updates but if these are not registered with the local authority by the consumer there is no source to identify an address update in our systems. This may result in later difficulty identifying accurate MPRNs during the change of supplier process and NGN investigates these as they are raised. As noted above, the volume of these enquiries are not material in the context of total supplier switching.

Xoserve Limited	Xoserve observes that the most common cause of poor address data quality is the challenge for the industry of maintaining alignment of data in an environment where there are multiple attributes in use, where addresses are not held by all parties in a common and consistent format, and where synchronised updating of multiple stakeholders' address records is difficult to achieve. A specific cause of poor address data quality that impacts processes operated by Xoserve is the use of plot addresses during the M Number creation process, as only limited validation is possible. Dependent on the use of data within Shipper processes, the existence of poor address data quality may be detrimental to an efficient Supply Point transfer process. It may also have implications for the accuracy of energy allocation processes, as post code errors may place a Supply Point in an incorrect LDZ leading to the application of incorrect Exit Zone and End User Category data. Xoserve has collaborated successfully with some Shippers in reducing the number of plot addresses on the Gas Transporters' Supply Point Register, but the ongoing creation of new M Numbers continues to add to the number of plot addresses.
Money supermarket	MSM are not made aware of large volumes of poor address quality issues by customers or by the 3rd party data supplier they work with. Customer complaints from the MSM energy channel are captured directly from the customer if they contact MSM. However for 2015 there have been single figure complaint numbers related to address and meter mismatches. The one that stands out is a customer who cannot complete the question set on the MSM website as their meter is classed as a business meter. In these cases, MSM do not have the authority or rights to seek changes to the meter details on behalf of the customer and therefore inform the customer that they need to discuss the issue with their existing energy supplier. There is a process in place to handle rejected applications. There are a number of reasons why an application may be rejected. Where data quality is the root cause e.g. an incorrect meter number and address combination there are 2 processes to resolve this: 1. The supplier informs MSM and MSM contacts the customer to try and resolve the issue e.g. asking if the customer chose the correct address or asking them to check their meter numbers manually. 2. The supplier does the same but contacts the customer themselves. The traditional suppliers (big 6) will contact the customer themselves. The matching performed by our 3rd party data supplier (triangulation) is not 100% accurate. There are addresses between ECOES and SCOGES that do not match – circa 10% is quoted. Where an address changes from 'Plot 1' to 'New House Name', this is not always reflected in the various Electricity, Gas and Royal Mail databases at the same time and therefore contributes to data mismatches. If triangulation fails, a customer needs to navigate this as they use MSMs website. Currently, the customer will be asked for a missing meter number as they can only chose 1 supply address. Multiple occupancy properties seem to be where a number of data anomalies are found in the various source databases. Whenever MSM and their 3rd party are discussing quality issues, these get discussed the most. The primary effect to our customers if the underlying data is wrong is a missed opportunity to

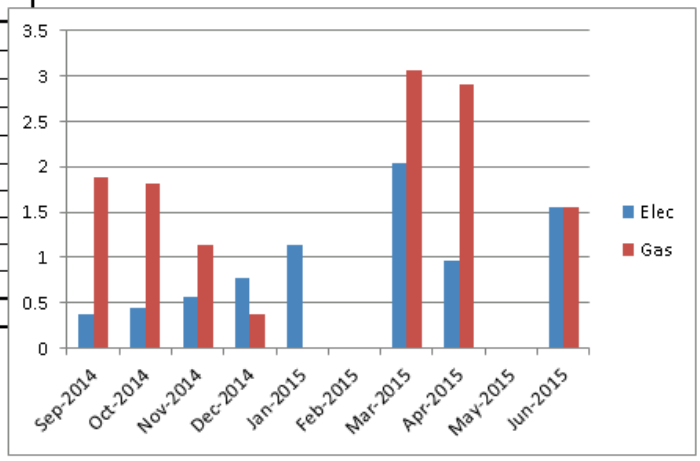
	make or even be presented with a potential saving. The wider effect is the creation of detractors (NPS) and a breeding of apathy to switch and make savings if the customers experience is bad. The effect to MSM is a cost in terms of servicing the customer to navigate the data quality issue. If a customer compares prices on our energy channel, clicks through to an energy supplier, and switches their supply to them, MSM get paid a fee. If the switch doesn't go ahead for whatever reason, MSM don't get paid. Fixing data quality at source (Suppliers / Distributers / ECOES / SCOGES) is not a well understood process. The process is not timely and there are no SLAs to manage a customer's expectation or any of the parties involved in the process. The solutions being proposed in this consultation will not necessarily remedy this. There should be both proactive and reactive well documented processes in place to ensure data quality is attained / obtained. This area needs considerable attention. Every party in the chain should be tasked and accountable for making sure data quality is championed, measured and reported on. A supplier who is losing a customer to another supplier, needs to process data quality issues (which inevitably will lose them that customer), with the same vigour as the supplier who is gaining the customer.
UK Power Networks	For UK Power Networks, the most common causes of poor address data are: • The quality of legacy address data from periods prior to market start up • New connections plot to postal issues • Vanity addresses • Inconsistencies between the Royal Mail and the Ordnance Survey data Cleansing of existing address data is an MRA requirement for all distribution businesses. We have no comments on erroneous transfers or customer switching.
ScottishPower	During the gains process, the most common causes of address data quality issues are as follows: • Inherited data from another Supplier • Agent/User error • Flat details provided by customer do not match the meter number / premise • Address found but there is no associated MPAN/MPRN From a new connection there are issues that can have an impact on the customer billing. These are mainly caused through poor address data quality provided by builders. Because these are new plots, many do not have a full postcode. During this stage, the address quality is not complete and partial postcodes can cause a number of issues until Royal Mail have established a full postcode. Should the address data not be updated from a plot address, the MOP / MAM will reject any request for a meter installation. This can cause a delay to supply and, ultimately, billing. At present, we are unable to provide any estimated costs relating to these issues.
Scotland and Southern Gas Networks	The most common causes of poor address data quality in our business are due to third parties such as developers and Utility Infrastructure Providers not having access to a firm street address for a property that they are constructing. Poor address data can also lead to duplicate

	addresses being added to our systems which may result in duplicate MPRN's being created. We have found instances of duplicate MPRN's being added to the count of legitimately unregistered sites which in turn costs the industry time and money to correct. Legacy data that is held in Xoserve's systems will potentially need to be data cleansed to enable the mapping of the UPRN, this process will be costly and will take a considerable amount of time to complete.
British Gas	The consultation has captured most of the common causes and effects of poor address data issues. Inaccurate data provided for New Connections is an ongoing issue within the industry. The main concerns are listed below: • Initial post codes are either not complete, or actually refer to a neighbouring street to a development, there is no clear process that exists for dealing with incomplete post codes or ensuring all records are updated correctly and harmonised afterwards. • District areas are provided in City/Town fields for some records and District fields for others the lack of consistency can cause duplicate MPRN / Addresses to be created. • Meters being installed at different plots to those appointments that have been booked for, create crossed meter issues. • Lack of consistency in updating plot details to postal address details and no ownership of responsibility, similarly for street renaming, property reconfigurations and demolitions, there is no clear process for updating all interested parties. • Building conversions which lead to similar house names (I.e. The Barn or The Old Barn). • Flat details not being consistent across the country for example; Flat A, 20 This Road may or may not be the same as 20A This Road. 2/1 Block of Flats or 1/2 Block of Flats – Either one could mean Flat 1 Floor 2. It is not clear at this time whether and if so how, the proposed options would resolve the above issues.

Question 5.2
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 percentage) 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).

Respondent	Response
National Grid Distribution	Nothing further to add.
SmartestEnergy	Not applicable
Northern Powergrid	We believe this question should be directed to suppliers.
Power Data Associates Ltd	The issue of crossed meters is probably larger than any recorded numbers. One of my colleagues brought a property two years ago and suffered a three way split with the gas meter. The original gas supplier at the time resolved the problem within their own systems so billing was correct, but when he changed supplier, it revealed itself again as the central systems had not been updated.
ESP Utilities Group	We do not measure this statistic and we do not have the visibility of the proportion of ETs within supply point transfers.
ESP Electricity Limited	We do not measure this statistic and we do not have the visibility of the proportion of ETs within meter point transfers.
Scottish Power Energy Networks	We do not currently track erroneous transfers (or Supplier Billing issues), as these are generally managed between the Supplier and Customer. We would apply the update post validation on our internal systems. We would in many cases not be made aware of the direct impact on the customer. We have small volumes of rejections on a monthly basis, as we review updates manually and would co-ordinate with the supplier if more information was required.
GB Group plc	Please see examples in responses to Question 5.1 above
UCL Energy Institute	The examples above account for very few records in the data we have used (about 0.5% of all electricity meters for a single London Borough)
Switch Gas and Electric Limited	ETs are less than 1% per month because of the process that we operate. We do not have any specific analysis on this.

First Utility	Over the last 12 months (September 2014 - August 2015) our business activated 8165 supply points back to industry parties through the erroneous transfer process. This figure presents significant challenges to our business. Incorrect address details and postcodes predominantly being the main offenders.
Western Power Distribution	• Erroneous Transfers - Only Suppliers can provide a full and accurate view regarding this. • Supplier Updates – The latest monthly figures for address changes proposed by Suppliers was approximately 2,000 with 60 being rejected as inaccurate. This gives a fail rate in the region of 3%. Whilst this is not a high number it could lead, if not challenged, to a number of potential delays in the CoS process. • Plot to Postal – In order to fully establish an accurate picture of the problems in this area an industry wide review would need to be undertaken.
Flow Energy	Approximately 1% of all the supplies switching to or from us result in an ET, with about 30% of those due to bad address data. A major part of these appear to be due to third parties sending data which has had different format or no address validation. We do not currently hold any individual data on the other issues that we can isolate sufficiently for the purposes of this consultation.
Fulcrum Pipelines Limited	N/A
Utilita Energy Ltd	This is difficult to do accurately and we would prefer to do a longer and more in depth analysis before providing a figure as we may otherwise mislead on the extent of the issue.
Electricity North West Limited	Erroneous data can lead to the creation of duplicate addresses as a result of difficulties with address matching.
Switching/price comparison service 1	Our energy comparison system is still on a soft launch. We have only recently put our first supplier switch pages live, so do not have sufficient data to respond to this question.
SSE Energy Supply Limited	Total ET Gains raised or received; the breakdown shows where SSE has confirmed the address provided was correct however the national database was showing as incorrect.

<table>
<tr><td></td><td>
<table>
<tr><th colspan="3">Address Correct but National Database Incorrect for total ET's (%)</th></tr>
<tr><th></th><th>Elec</th><th>Gas</th></tr>
<tr><td>Sep-2014</td><td>0.37</td><td>1.88</td></tr>
<tr><td>Oct-2014</td><td>0.45</td><td>1.82</td></tr>
<tr><td>Nov-2014</td><td>0.57</td><td>1.14</td></tr>
<tr><td>Dec-2014</td><td>0.77</td><td>0.38</td></tr>
<tr><td>Jan-2015</td><td>1.14</td><td></td></tr>
<tr><td>Feb-2015</td><td></td><td></td></tr>
<tr><td>Mar-2015</td><td>2.04</td><td>3.06</td></tr>
<tr><td>Apr-2015</td><td>0.97</td><td>2.91</td></tr>
<tr><td>May-2015</td><td></td><td></td></tr>
<tr><td>Jun-2015</td><td>1.56</td><td>1.56</td></tr>
<tr><td>Total</td><td>7.87%</td><td>12.75%</td></tr>
</table>


</td></tr>
<tr><td>RWE npower</td><td>Please see below for responses from our Npower Business and Npower Business Solutions teams:

Npower Business
It fluctuates massively but usually have circa 50 ETs open at any one time. We do not classify these into source types.

Npower Business Solutions
In a typical month, the number of returned site visit check codes with “incorrect address” is 587.</td></tr>
<tr><td>E.ON</td><td>Confidential response removed.</td></tr>
<tr><td>Wales & West Utilities Ltd</td><td>The existence of poor addresses means we expend a lot of unnecessary administration effort when investigating Gas Safety (Installation and Use) Regulations disconnections, shipperless and unregistered sites, and theft of gas situations. It means that processes such as making MPRNs dead upon completion of a disconnection of a service need manual intervention to ensure we are making the correct MPRN dead. We regularly see discrepancies between our asset records and the MPRN record, which means that we undertake around 3,000 site surveys a year to confirm if a property actually has a gas supply and the status of that gas supply. Estimated costs £70-100k per annum.</td></tr>
<tr><td>ElectraLink Limited</td><td>Analysis of the D0301 ‘Erroneous Transfer Communication’ data flow shows that nearly 60% of all ETs are sent with the ‘Reason for Return’ as ‘Incorrect MPAN Selected’ – this equates to approximately 2,000 erroneous transfers (0.65% of all COS events) per month. Deeper analysis of the reasons why the Supplier picked the wrong MPAN is not possible using DTS data due to the inconsistent level of information provided in the ‘Additional Information’ field in the flow. However, comments such as ‘wrong site transferred’ and ‘incorrect address taken’ do feature regularly.</td></tr>
</table>

	In producing the white paper, we analysed D0004 flows for Site Visit Check Code 28 'Unable to gain access due to insufficient address details'. This showed that nearly 10,000 meter reading visits were failing per month in 2013 due to inaccurate address data. In 2014 and 2015 this has actually increased to over 13,000 per month. While not directly linked to the success of a COS event, this does show that the quality of address data is having a detrimental impact on industry processes. With the mass roll out of smart meters imminent, when all domestic and SME properties will need to be visited, this has the potential to add further complications and delays the industry can scant afford, so this suggests the timing for attempting to improve the available information is quite prescient.
Money Saving Expert	No response
switching/price comparison service 2	Please see response to question 5.1
GTC	We are unable to provide any quantitative or substantial qualitative analysis of how the issues described in 5.1 impact on the customer experience as suppliers are the party who will resolves issues surrounding erroneous transfers on our network.
EDF Energy	EDF Energy applies the standard ET reason types, e.g. incorrect MPAN selected, and does not capture further categorisation such as the examples given.
Northern Gas Networks	NGN has undertaken a number internal initiatives and supported initiatives by other industry parties to correct erroneous data which has resulted in an increase in the number of address updates requested against the central Xoserve data. In quarter 1 of 2015 approximately 350 address updates were processed manually as a result of specific investigations or identified through business as usual processes. This has increased from around 200 in the same period in 2014 showing a year on year increase as focus on these issues increases. Due to the nature of the impacts on NGN it is difficult to quantify a cost due to the increased time taken to carry out investigations. However, when poor site data exists we man need to undertake a visit the site to gather more information. This carries a significantly higher cost than when we can resolve a query or site investigation through desktop exercises alone.
Xoserve Limited	Xoserve systems and processes do not require the tracking of erroneous transfers. As such, it is not possible for us to assess the extent to which erroneous address data may or may not impact the Supply Point transfer process.
Money supermarket	MSM receive limited information from Suppliers about ETs, however this information has been requested. MSM get informed of rejections/cancellations which runs at approx. 10% of applications submitted. As mentioned, MSM receive details of rejections and either an MSM team or the (gain) Supplier will work directly with the customer to try and get an accurate application submitted. The application status information (internally known as sales data), passed by new Suppliers to MSM is limited and supplied to MSM in different frequencies and qualities.

	This continues to be an issue as MSM are often in the dark regarding application statuses or any problems a customer may be having with an application.
UK Power Networks	We do not have a view on the causes of erroneous transfers. UK Power Networks has no visibility of data quality issues linked to erroneous transfers, customer switching or customer billing. On a daily basis, approximately 10% of all address amendment requests we receive from suppliers either require us to request further information before we can update the MPAS address or are rejected (with a valid reason noted). The main reason for queries or rejections is that acceding to the request from the supplier to change the address would break a UPRN match and leave an address unmatched.
ScottishPower	Confidential response removed.
Scotland and Southern Gas Networks	N/A
British Gas	Confidential response removed.

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.

Respondent	Response
National Grid Distribution	As mentioned previously NGD currently utilises AddressBase in order to ensure as robust an address data set as possible is held in order to carry out its business activities. It should be noted that achieving a complete match between the PAF data held on the Supply Point Register and the address data within AddressBase is challenging.
SmartestEnergy	Not applicable. However, we would draw attention to the withdrawal of registration process that can be used to prevent ETs materialising. If companies are corresponding with their customers in a timely manner then it should reduce the problem.
Northern Powergrid	We have cleansed our data in line with Address Base Premium and are in the process of implementing a solution to maintain our address data in the same way on an enduring basis. In addition, we proactively contact developers/local authorities to request plot to postal mappings. As suppliers have direct contact with end customers we on occasions contact suppliers to request the address details they hold for the customer.
Power Data Associates Ltd	N/A
ESP Utilities Group	We actively coordinate with Local Authorities to attain postal information as soon as possible.
ESP Electricity Limited	We actively coordinate with ICPs, Developers and Local Authorities to attain P2P information as soon as possible. Where we are made aware of crossed meter or addresses being deemed incorrect in ECOES, our first control is to validate the address update request (please refer to response in Q3.1 above).
Scottish Power Energy Networks	We have introduced a number of weekly reports which identify different instances of incorrect address data to the administration team for action where required.
GB Group plc	To help reduce the impact of the problems outlined in 5.1 above, GBG cleanses the DNO/IDNO and GT/IGT data against PAF in an attempt to improve the quality of the addresses and to reformat them into a consistent structure. We then merge the gas and electricity data together into a consolidated database bringing gas and electricity records together where a confident address match is made. This then enables consumers to search a single data set for both gas and electricity switches through our online service. The cleansing and merging of the addresses in this way helps to ensure that the correct

<table>
<tr><td></td><td>postcode is applied to an address so aiding the chances of a successful search for end-users. Additionally, it ensures that minor errors in the ECOES and SCOGES versions of the addresses are corrected before the point of capture.
However, the matching process is necessarily conservative: If there are any ambiguities, the gas and electricity records are kept separate and this can sometimes appear confusing to an end user who may see their property listed twice, with slightly different versions of their address, when it is seemingly obvious to them that they are one and the same property as in the case of "Cromdale, 19 Woodfield Hill" in 5.1 above.
The problem here is that they are unable to select two addresses from the pick-list presented to them by the switching site: If the web-site offered the chance for the user to select multiple addresses, then this could possibly be a route to helping to manually resolve address discrepancies. As noted above, both versions of an address could easily be stored against a single reference, one as the 'official' and the other as the 'alternate'.
The use of AddressBase Premium which can hold multiple versions of an address for a property against a single UPRN would help to improve this. One could possibly envisage a pick-list for CR5 3EL as something like this:
<table><tr><td>3 Woodfield Hill (The Spinney / Whitegates)</td></tr><tr><td>5 Woodfield Hill (Tall Trees)</td></tr><tr><td>5 Woodfield Hill (Tall Trees)</td></tr><tr><td>9 Woodfield Hill (Carlton Lodge)</td></tr></table>In addition to providing access to our consolidated MPAN and MPRN database through the Utilities Register, GBG is able to offer advice to its clients on customer-registration and data capture processes via consultancy services as well as through the provision of implementation and 'best practice' guides. We believe that these channels also help to reduce the number of erroneous transfers.</td></tr>
<tr><td>UCL Energy Institute</td><td>We have written our own address matching software which resolves most of the problems we have encountered</td></tr>
<tr><td>Switch Gas and Electric Limited</td><td>We ask the customer to confirm the MPAN/MPRN that is on their existing energy bill</td></tr>
<tr><td>First Utility</td><td>We have expanded our operational teams considerably to deal with issues relating to customer switching. These additional staff contact customers directly as well as contacting other industry parties to assist with resolving customer switching queries. We have also incorporated additional internal business processes to ensure accurate data is used when acquiring new customers. These controls manage an ongoing issue however and do not represent a long term plan for tackling the root causes of address data quality.</td></tr>
<tr><td>Western Power Distribution</td><td>Supplier Updates
MAP09 policy followed for all address updates received.
Includes independent verification of proposed address update and notification to Suppliers of action taken.
Plot to Postal
Once notified of update this would be compared to the address held.</td></tr>
</table>

	• Where this is established to be valid, the update would be applied. • Where other plot addresses are present in the vicinity of the update these would also be investigated to identify if any similar problems exist. This would involve liaison with the relevant WPD Network Services team and the relevant Suppliers. • If any problem experienced validating the Plot to Postal update WPD would ask for Meter serial number details from the Supplier or Customer to confirm the correct identity of the site.
Flow Energy	We have raised the issue with the relevant 3rd parties and/or have stopped using them.
Fulcrum Pipelines Limited	Updating FPL system ASAP from developer plot addresses with postal addresses Investigating full sites & updating results from findings in FPL systems where crossed meter(s) identified. This would then be passed onto the industry via reports, i.e. Portfolio Extracts
Utilita Energy Ltd	The process put in place have been explained in previous answers. These have successfully reduced the amount of errors.
Electricity North West Limited	PAF validation.
Switching/price comparison service 1	N/A
SSE Energy Supply Limited	Reports are produced which help to identify addresses where incorrect data has been gained. Further detail can be found in question 3.3.
RWE npower	Please see below for responses from our Npower Business and Npower Business Solutions teams: **Npower Business** • Verify MSN with customers where there are multiple MPANs/MPRs at an address (and not all being moved at once / already on our supply). • Verify MSN if MPAN / address combination does not agree with ECOES / XOSERVE. **Npower Business Solutions** We have documented processes worked by our teams to consistently resolve any of the issues that are mentioned above. See comments to 3.1
E.ON	Confidential response removed.
Wales & West Utilities Ltd	Under our current process we create all MPRN for a development upon acceptance of a quotation. In the case of new developments or redevelopments contact is made with the customer upon acceptance to check if a PAF validated address is available as an update to the original address submitted. This reduces the volume of plot and flat addresses registered each year and hence reduces potential future queries over that address.

	We have considered a change to our business process not to register the new MPRN until the plot is ready to be connected. The logic to this is that the developer is more likely to have a PAF validated address at this time which may be some years after the acceptance of the initial quotation for the site. However, a number of system and process changes are required and it currently sits low on our business priorities. We have invested a lot of time and cost into investigating over 10,000 unregistered and shipperless sites over the last 18 months. This has involved reviewing of cancelled projects to ensure MPRNs have been cancelled, removal of duplicate MPRNs, cleansing of plot addresses to PAF addresses and site visits to cross check meter serial numbers to MPRN addresses resulting in address changes and registration of site with shippers.
ElectraLink Limited	As set out in 3.3, ElectraLink can carry out validation of data contained within DTS flows. At present, the only option switched on for all participants is the character limit, which will pick up over-long postcodes. The existing enhanced validation could be applied to highlight incomplete address data; however the DTS User Group has not requested that this is universally applied. The functionality of the DTN would allow for much more powerful validation and cleansing of address data to be developed, which we will discuss in 6.3.
Money Saving Expert	No response
switching/price comparison service 2	Please see response to question 5.1
GTC	The main way that we aim to reduce the potential for incorrect data quality and the associated customer impacts of such incorrect data quality is by contacting, as much as possible, both councils and developers. We are, to a degree, also reliant on suppliers raising queries on address data that they believe is incorrect.
EDF Energy	Our registration and billing systems produce process exceptions which may be resolved either by another automated process or by manual intervention.
Northern Gas Networks	Additional validations have been implemented across a number of processes within NGN in addition to more general data quality awareness across the business. This work in ongoing and it is too early to be able to quantify the improvements.
Xoserve Limited	Please refer to 5.1.
Money supermarket	Where data quality issues have been identified, feedback has been sent to MSMs 3rd Party data supplier. If they have been at fault, changes have been made by them – however these are rare. The 3rd party have various continuous data quality processes in place to improve their data product. More details can be supplied if required. The 3rd party will not make assumptions with data matching between systems. If there is any

	doubt in a match between Ecoes and SCOGES, 2 addresses will appear in their data. In this case, a customer doing a dual fuel comparison will be prompted to supply one of the meter numbers manually to fill the gap in the single address record chosen.
UK Power Networks	We respond to address amendment queries from suppliers. The creation of new MPANs and the associated address is in accordance with our ISO9001 processes. We endeavour to match addresses to UPRNs and we have a policy of not changing addresses if this results in a matched address becoming unmatched. We report on all new MPANs/addresses at a team and individual level. There is regular management reporting which gives us the ability to deal with any issues or update our training processes.
ScottishPower	The validation rules that have been implemented into ScottishPower's processes have resulted in volumes of erroneous transfers being minimal. ScottishPower were involved in direct discussions with Royal Mail a number of years ago with the aim of reducing address data quality issues. There was then investment in the PDS service from C&C to ensure that addresses undergo validation routines. ScottishPower were involved in discussions with Land Registry Scotland to discuss how the use of the UPRN in the smart environment could improve the quality of processes. England and Wales already adopt the use of the UPRN. ScottishPower also create exceptions whenever any discrepancy in addresses are identified. These exceptions require intervention to ensure that inaccurate addresses are captured and resolved.
Scotland and Southern Gas Networks	SGN has recently contacted all the local authorities in its footprint to ask that they add SGN onto their circulations lists which they issue to the emergency services and the post office containing address amendments and updates. This initiative means that we are informed when a plot address is issued with its postal address. The information that we receive allows us to update Xoserve central systems in those instances where we've had to raise a plot address against a new MPRN to allow a new connection to proceed. As well as being told about plot address updates we receive address amendments where properties are converted into flats or where the occupier changes the name of the address.
British Gas	This is a high priority for British Gas we have enhanced the use of the QAS system to triangulate MPAN/MPRN numbers. Our manual exception process involves outbound dialling of customers to confirm and correct inaccurate information. We also reconcile the Provisional Site Report (PSR) and Meter Fit Report (MFR) to align the initial details to MFR if any inaccuracies occur. We operate a continuous process of improvement of our address base through data matching and cleansing to.

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.

Respondent	Response
National Grid Distribution	Whilst NGD currently use address data derived from AddressBase (in addition to the data held in the supply point register) in order to bolster our ability to carry out our business activities, we recognise substantial difficulties exist in matching ALL MPRNs to the relevant UPRN. Therefore in introducing the mandate there would invariably be potentially large cost and resource implications on data cleansing and data matching, predominantly for existing MPRNs. That said, a mandate would standardise the address data held between the Gas and Electricity registration systems and could therefore be of benefit in the switching process especially dual fuel.
SmartestEnergy	We would have no objection to distributors being mandated to populate their systems with UPRN as this would have no additional impact on our systems, unless this is the thin end of the wedge with suppliers being obliged at a later date to make system updates and pay 6 figure sums for address look up products.
Northern Powergrid	The costs to complete an initial data cleanse and implement an enduring address maintenance solution are circa. £300k and the Address Base Premium annual license fees are in the region of £50k. This project was initiated as part of a wider asset management program and currently does not include the application of the UPRN during MPAN creation which would incur further costs. Costs, specifically licensing costs, for small business could be somewhat expensive and we believe consideration should be given to the procurement of an industry wide license. We believe the introduction of a mandate for the UPRN should simplify the change of supplier processes especially for dual fuel customers however, it is prudent to point out that there would be no mandates on the use of the UPRN by either the property developer or local authority and therefore the UPRN could not always be applied at the time of the creation of the new connection MPAN. Also, the UPRN is another (in addition to the MPAN/MPRN) unique reference number to a property, and although this will be a single identifier across the electricity and gas markets it will only improve data quality if parties apply the correct UPRN, so although it should improve data quality issues it will not eradicate those issues completely.
Power Data Associates Ltd	The lack of the UPRN including a check digit is a concern. Most organisations have included a validation to ensure the MPAN is correct at the time of data entry. This prevents significant errors later in the process.

	The report identifies that an MPRN has a check digit, but I am not convinced that it does. The number of digits in an MPRN varies. The population of the UPRN can only occur using the existing address data available, which is recognised to be poor. So the 80:20 rule will probably apply, the bulk will match fairly well, but the remainder will require considerable effort. Even then a proportion will be 'wrong' although a false reliance on the accuracy of the UPRN may be used by other stakeholders leading to further problems.
ESP Utilities Group	Option A would incur significant cost to business and would be an enormous project for industry. We believe it would take at least 12 months to rectify issues for existing supply points, and we would require additional resource to introduce this as an enduring process. We understand what the introduction of the UPRN is looking to achieve but when drawing comparisons against the activity described in response to question 5.3, we feel formalising the process of how address data enters the market goes above and beyond what is necessary and are unsure if the benefits justify the costs incurred.
ESP Electricity Limited	Option A would incur significant cost to business and would be an enormous project for industry. We believe it would take at least 12 months to rectify issues for existing meter points, and we would require additional resource to introduce this as an enduring process. We understand what the introduction of the UPRN is looking to achieve but when drawing comparisons against the activity described in response to question 5.3, we feel formalising the process of how address data enters the market goes above and beyond what is necessary and are unsure if the benefits justify the costs incurred.
Scottish Power Energy Networks	**Costs**: We are currently moving towards embedding this in our existing processes, and as such over and above the cost to purchase the data we have a small number of FTE working on data analysis and cleansing. At an industry level the costs are high as each individual party has to purchase the data independently. Scottish Power Energy Networks have taken advantage of prior, significant investment in Address Based Premium (for our internal systems) to facilitate Address Data Quality (matching process) and as part of a Data Improvement Initiative. Additional activity is currently being progressed at a cost of around £75k to load the UPRN Data. **Benefits**: We feel that this has the potential to have benefits to the industry, over and above our Internal Organisational benefits to 'better manage the network'. We believe that with the rollout of the Smart Meter Programme and the introduction of the DCC that this is the time to ensure that there is consistency in data across the market. **Impacts**: This has had a significant impact on our business, but one that we have fully supported and recognised the benefits of carrying out the data cleansing work for. We believe that the impact of mandating distributors to populate the registration system will differ between organisations. **Risks**: There is a high risk that there may be a 'pot' of data where it is difficult to match the UPRN to the MPAN/MPRN due to historic updates that have been applied to the address, across each service. The silo nature of the current market will mean that there is limited scope for DNO/GT/IGT to identify and potentially resolve these issues. In addition we have yet to see UPRN data in operation and it remains to be seen how Developers will conform to the use of UPRNs. There is a risk that UPRN becomes another data

	burden on the industry and provides no actual tangible benefit. We believe that Option A will begin to address the inherent data quality issues in the New Connections area, as the utilisation of the UPRN at the earliest opportunity from the key source will better ensure a consistent address format rather than the independent update system that is currently in place.
GB Group plc	**Consideration of Option A** **New Builds** In the absence of new processes, the appending of UPRNs to new-build properties would rely upon the matching of the address registered against the MPAN or MPRN, to a standard reference (either AddressBase or the LLPG). The UPRN is critical to enable future changes to the address on the AddressBase reference, to be reflected in the MPAN or MPRN database by the transporter or distributor, for example, when a plot changes to a 'real' address. The address of a property (in whatever form, whether a plot reference or street address) is likely to change during the course of the construction phase and the UPRN may be allocated at any stage: AddressBase contains properties with a 'provisional' plot address, other properties having both an 'historic' plot address as well as an 'approved' real addresses and other recently built properties that contain only an 'approved' real address with no historic plot information. The installation of the energy supply and the allocation of MPANs and MPRNs can occur at any time during the build and is usually not synchronised with the assignment of the UPRN by the local authority. Consequently the address held by the GT or DNO may bear little or no relation to that associated with the UPRN. Subsequent attempts at matching the MPAN or MPRN address with AddressBase can be uncertain at best, and at times impossible. Even if the UPRN is assigned by the local authority at the planning stage, because of the significant time delay of up to two months before the address appears on the published version of AddressBase, it would in general not be practical to use AddressBase to link a UPRN to an MPAN/MPRN *at the time at which the supply is installed*. For this reason, the installer of the gas or electricity supply must coordinate with the local authority in order to confirm that the UPRN has been assigned before the installation can proceed. Only if this process is strictly followed, can the benefits of attaching a UPRN to the MPAN/MPRN address can be realised so ensuring that: • the gas and electricity addresses are clean and consistent and can be subsequently brought together by other industry players; • future changes to the address can be updated within the transporters' and distributors' databases; • the parent/child relationships of properties can be maintained; • 'addresses' for sites without postal addresses can be maintained. Such changes to processes up-front of first-time registration will certainly bring major benefits to subsequent supplier switches and help to reduce the number of erroneous and failed switch applications. **Existing Builds** As with new builds discussed above, the appending of UPRNs to existing address data also relies on the matching of the MPAN and MPRN address to AddressBase. However, because the process for the initial assignment of the address may have been ad-hoc or one without

	controls, with address changes over time the version held by the transporter/distributor may differ considerably from that held on AddressBase. Research shows that in main, a reasonably high proportion (80%-90%) of residential supply-point addresses can be matched to AddressBase, UPRNs easily appended and the gas and electricity addresses brought together. However, this still leaves a large number of unmatched or ambiguous records. Further work can be undertaken to resolve these residual addresses from simply modifying the operating parameters of the matching software through to manual investigations. Relaxing the automated match tolerances to push match rates ever higher, will often lead to lower levels of confidence and increase the likelihood of incorrect matches or 'false-positives'. Manual investigations even with the use of interactive correction software can be a time-consuming and costly exercise and there will quickly come a point at which it is uneconomic to continue. It is highly likely therefore that any matching process will result in a number of addresses that cannot be resolved and to which UPRNs cannot be attached, the large number of 'plot addresses' that exist on both ECOES and SCOGES databases. **Suppliers' Customer Addresses** The sharing of supplier (retailer) data may help to resolve many of the outstanding unmatched address issues subject to complying with data protection regulations. There are many addresses for which suppliers hold the correct information yet which cannot be found on transporters' and distributors' databases. The resolution is simply a case of matching on MPANs and MPRNs, (but also ensuring that appropriate quality assurance processes are followed). If the industry can agree on a fair data sharing policy then it is believed that this would be a straightforward and economic route to resolving many of the unmatched and ambiguous addresses enabling UPRNs to be appended to these records. **Options for Appending UPRNs** In order to populate registration systems with UPRNs, GTs, IGTs, DNOs and IDNOs will need to match their supply addresses against one of the OS AddressBase products. This can be achieved in one of three ways: • *Develop own matching software:* The transporter/distributor designs and develops its own software to be used in-house to undertake the address matching and append the UPRNs. Such software is not simple to develop and typically includes a number of complex string-parsing routines, rule-based algorithms, fuzzy-pattern-matching logic, address-reformatting processes and manual correction interfaces. In addition, the business will need to purchase a licence to use the AddressBase data. Costs for this are indicated below. • *Purchase matching software:* The transporter/distributor purchases a software product that can be used inhouse to undertake the address matching and append the UPRNs. Products to automate the matching of customer addresses to a standard reference such as AddressBase are available from a number of OS partners. Often these will include a manual correction facility allowing end-users to manually review the results from the automated run and to correct residual addresses that the automated engine cannot match with a high enough degree of confidence. This solution will also require the

purchase of an AddressBase licence from OS because the data is to be consumed in-house.

Because these two options would require the AddressBase data to be purchased, the customer addresses can be appended not only with UPRNs but also with other data such as classification codes, reference links to external databases such as PAF and VOA, roof-top geo-coordinates etc. However, the current OS licence model does not allow any of these extra data attributes other than UPRN to be passed to any third party on a royalty-free basis. See notes on licensing under Costs below.

- Use an external bureau:
  The final option is for the transporter or distributor to employ the services of an external bureau to populate their consumer address data with UPRNs. Providers of address cleansing software discussed in (ii) above usually operate such services and these can often be tailored to suit clients' particular needs such as address correction, de-duplication, enhancing with telephone numbers or other related information etc. If the requirement is simply to cleanse the addresses and append UPRNs, then GBG understands that no AddressBase royalties would be payable by the transporter/distributor because of the recent relaxation of the OS AddressBase licence (see Costs below).

Costs

GBG believes that the following reflects the current situation for the licensing of OS AddressBase Premium products:

A DNO/IDNO or GT/IGT wishing to append UPRNs to its own supply-point address data would need to purchase an AddressBase Premium licence which includes all delivery points as well as 'Objects Without Postal Addresses' (OPWAs). For enterprise use, the entire dataset covering Great Britain would incur an annual licence fee of just over £189,000. This figure is reduced if fewer geographical areas are purchased. Furthermore, the figure reduces even further for a low number of end-user terminals. For a single terminal use for example, but with access to the full UK data, the current price is just over £23,000 per annum.

UPRNs that have been appended to the supply-point addresses can be distributed on a perpetual, royalty-free basis on the condition that no other AddressBase fields are is added to the data.

If a third party organisation was to process the data on behalf of transporters and distributors, then costs may reduce further. GBG understands that the transporter or distributor would not need to purchase an AddressBase although the third party processor would inevitably charge for their services.

Beneifits

The appending of the UPRN to MPAN and MPRN addresses that is not shared has no other direct benefit to the rest of the industry. The UPRN simply enables the transporter/distributor to match gas and electricity addresses together and to help remove duplicate addresses within their databases.

The benefits of implementing Option A are realised purely as a consequence of address cleansing and include the following.

- Improvement of the quality of the addresses held by the transporters and distributors which feed through the industry. This should enable the switching sites

	to present a more accurate and complete list of properties to their customers during the switching process; • The switching agents will therefore also be able to more accurately append MPANs/MPRNs and associated meter details to a higher number of addresses; • The transporter/distributor will be able to apply address changes as and when they are made available through the UPRN. However, this will require the purchase of an AddressBase licence. • If an AddressBase licence is purchased, then the transporter/distributor will also be able to append other AddressBase attributes such as provisional, alternate and historical addresses, grid references, classifications and database keys providing links to external data sets such as PAF and the VOA. This would provide the business with a complete picture of their customers' properties and possibly help to improve the other services such as installation and field maintenance. **Impacts** Transporters or distributors undertaking any option will require a potential software development project, increased address management operations and ongoing database maintenance all of which will necessitate a considerable resource spend. The tasks involved sit chiefly with the transporter/distributor yet they will not stand to reap the main benefits of the exercise as it is the rest of the industry as well as the consumers who will mostly gain from improved address quality. **Risks** Undertaking any address cleansing exercise on large databases containing several million records is an onerous task and one which will require considerable resource, strict project management controls and use of specialist software and services. Should the transporter or distributor elect to undertake the whole exercise in-house then the risks of failure and/or of soaring costs are considerable and may not justify the gain to the business when it is the end consumer, the switching agents and also the retailers who will receive the main benefits of improved address quality.
UCL Energy Institute	The benefits to us would be very large. Being able to match meters to VOA premises is a key jigsaw piece to the work we carry out. The risks of requiring many different organisations to do this is the possibility that different organisations may have different levels of attention to detail. Correctly assigning child UPRNs (when parent and child UPRNs exist for an address) is critical here. It would directly remove the issues we have listed in 5.1
Switch Gas and Electric Limited	I believe this will be successful if it aligns to the royal mail database.
First Utility	We support the long term aspiration of mandating transporters and distributors identifying the UPRN for current, and allocating to new, supply points. The successful implementation of UPRN in central systems will assist the long term plans of next day switching, DCC and smart implementation. This is a long term plan that will [help to] provide cleansed data. We believe that switching sites would need to start using UPRN's for this to be effective. This does not actually tackle the current issue of how industry data is cleansed as identified in Section 5. It

	does however require the assistance of the wider industry to manage any ongoing changes in data. As we note above, any failings of one particular party have significant effects on other suppliers and more importantly, on customers, thus the overall industry is adversely affected.
Western Power Distribution	**Costs** The costs to populate MPRS with UPRNs can be broken into three main activities: • Initial estimates indicate that 85% of UPRNs can be accurately matched and applied to MPANs/Addresses on the MPRS system in a largely automated manner at a cost to WPD in the region of £100,000. This covers instances where addresses are fully matched between the UPRN and MPRS database and where simple rules can be used to automatically create a match (e.g. only difference is "Ave" on one database and "Avenue" on the other). • Application of UPRN's to the remaining 15% of MPANs would be a costly and time consuming exercise. Manual intervention and investigation, potentially including site visits, would be required to ensure that a match between the UPRN and MPAS databases could be guaranteed. For example in WPD's case 15% of the MPAN population is in the region of 1,200,000 MPANS. If we assume a cost per MPAN of £2 to £5 per MPAN to resolve this would give a potential cost range of between £2.4m and £6m. This would also take a considerable time to complete, probably 2 to 3 years. • Changes to new connections systems and processes to capture UPRN early in the new MPAN cycle will cost in the region of £150,000. **Benefits** • Population of UPRN on the MPAS database would allow DNO's to provide information to DCC which could assist in their operation. • Application of the UPRN to the new connection process gives the potential to reduce/eliminate the instances of Plot to Postal issues. **Impacts/Risks?** • With different parties (Gas/Electricity) applying UPRNs to existing addresses there is a risk that different UPRNs are applied to the same address in the separate databases. • This is particularly relevant during the initial population process with a significant risk existing in the 15% manually allocated MPANs as noted above. • However for new properties the allocation of UPRNs to Plots should significantly reduce the risk of erroneous Plot to Postal updates.
Flow Energy	Option A has the potential to vastly improve the current data quality and help limit the current issues connected to it. Provided the UPRN is populated on both ECOES and Xoserve Data Enquiry and the address data has been validated by MPAS, suppliers would be able to confidently confirm they are identical for both fuels for a single site without the need for further access to the associated data.
Fulcrum Pipelines Limited	If individual parties needed a licence each in order to be able to populate & register UPRN's then this would be an impractical solution. A cost o £174,000 per licence would mean that the smaller Transporters, Suppliers & Shippers could struggle to exist or even go out of business. It could also deter some parties from wanting to become involved in the utility market. The loss of individual companies could restrict competition.

	If the cost of the licence could be shared by all parties and be dependent upon the number of supply points each party has (taken as a snapshot at the time when the licence was purchased then this could be practical. Although linked to property there is no guarantee that the UPRN could be linked to MPRN's &/or MPAN's. For example, if a developer moved an MPRN / MPAN label to another property because they don't fully understand the importance of the retaining the MPRN / MPAN to the property. For example, they believe that an MPRN allocated to Plot 1 should be moved to No 1 when a postal address is assigned to a property. Option A could help reduce data quality issues but would be an extremely large data cleansing exercise and may not be feasible or practical. There may still be issues associated with these types of exercise as each party may believe that their data is correct and refuse to amend it on the recommendation of another party. The way that the data is recorded by one party could be interpreted differently by another. It could only be managed throughout the industry if there was a central data registration point that was responsible for validating & managing any attempts to get the address changed. This would then be distributed to all parties, i.e. transporters, shippers & suppliers.
Utilita Energy Ltd	We agree in principle with a UPRN being used to reduce the issue faced with differing datasets between the 2 existing industry registration databases. The benefit should be weighed against the risk that by doing this it could potentially exacerbate the issue by causing suppliers to register two supplies that are incorrect rather than 1 incorrect supply that occurs current process. We would also stress the point that the expense of the system to use this should not be underestimated and echo the points made in answer to question 4.1. By not extending the approach to other industry users we are also risking an inconsistent approach in address data and therefore introducing a new layer of potential data mismatch.
Electricity North West Limited	UPRN Would be a positive benefit in that the likely benefits would be expected to outweigh the cost of licences and delivery although would not eliminate issues due to human error at data entry level.
Switching/price comparison service 1	**Costs** Additional cost of business to transporters and distributors **Benefits** transporters and distributors are best placed to provide information on meter numbers Information updated regularly **Impacts** would provide an added level of data validation or cleansing **Risks** Could information be submitted incorrectly? There is still an issue with addresses at the pre-build stage which this would not address.
SSE Energy Supply Limited	The concept of using the UPRN within the energy industry is new and we do not believe there has been sufficient informed debate. We are curious about the cost benefits that justify the

	vast amount of effort to bring the UPRN into the industry. Customers are not aware of the UPRN and would not know to quote it at point of sale. As previously mentioned there appears to be issues of how and when it is created as covered in 4.4. We have no evidence that the UPRN will ensure a smoother faster customer journey. The allocation of the UPRN is manual so it may be concluded that if it is incorrectly allocated then the industry will face the same issues as it currently does.
RWE npower	Our overall business favours option A, out of the two solutions suggested in the consultation. Whilst our Domestic business are interested in Option B (see 6.2 below), at this stage, Npower's overall view would be to proceed with option A. Please see below for responses to this question from our Domestic, Npower Business and Npower Business Solutions teams: **Domestic** The cost for doing this is yet unknown. However, we can expect increases to network cost which would be passed through. The risk to do this would be that there will be no control over the cost or timing of the implementation. The benefit will be a centralised and single source of accurate address data. By having the information held centrally it is better for competition, reduced cost impact on smaller suppliers. This option should improve the process for customer switching, improved accuracy and speed and therefore reduce erroneous transfers. The extent of the impact will be restricted to customer addresses which pass through the centralised database, ie change of supply to enable them to be cleansed. Any customers with simple service or billing issues may not experience an improvement as a result of this initiative. **Npower Business** From a supplier perspective this gives a more reliable ECOES / XOSERVE address. The thing we would be most interested in here is making sure that updates are reflected into the available data as rapidly as possible (to increase the likelihood that customer provided addresses match industry held addresses). Unclear costs associated with this since distributors would need a licence to pass-on UPRN address data (even if UPRN is not made visible to the suppliers). Also very unclear what happens when a disconnect is discovered and an incorrect UPRN is linked to an MPAN. Would the process be any more successful at resolving the issues than the current one? How to avoid fixes being undone each time a refresh of UPRN data is completed. **Npower Business Solutions:** Using Distribution companies, rather than Suppliers buying commercial address packages, would offer a more controlled way to use UPRN.
E.ON	In the way that it is proposed by the current UNC modifications, the gas Transporters who currently invest in PAF addresses and also those who currently use UPRN and AddressBase products will be required to use the UPRN to verify and update the meter point addresses periodically. The mod doesn't require the transferring of the UPRN from the transporters to the shippers/suppliers – as the Shippers/Suppliers will be able to rely on the accuracy of the

	address held in the Supply Point Register for the meter point - as being accurate and unique as required by the GT licence condition. The expectation is therefore that the shippers/suppliers will not need to make any changes to their systems or data flows to hold and receive any additional information. The changes to facilitate the provision of the UPRN from the GT's agent to the DCC have already been built into the existing UK Link Files – but there is currently no obligation to populate it. The benefits of this approach is that the GT's Agent will cease to receive the current volume of address queries raised via the CMS Query System, and won't need to undertake the manual work that is required to validate and update those changes. Equally Shippers/Suppliers will challenge far fewer addresses. An estimate of the volume of gas address queries being processed by the Large Transporters (raised by Shippers) was stated as approximately 1500 per week or around 75,000 per annum during one of the UNC Distribution Workgroups developing the modifications. This must equate to a significant amount of manual work being undertaken by Xoserve at the expense of the industry. This is in addition to the costs already incurred for provision of the PAF addresses. It is also a fact that PAF addresses do not cover all meter points addresses, and many meter points have supply contracts, but those addresses aren't subject to any validation. The benefits of the modification would be the improved address information, including the ability to track the historic changes to the address. It will remove the expensive manual query processes that cost Xoserve, the GTs and the Shippers/Suppliers. The GTs will improve the quality of the address, which will better facilitate their licence obligation to hold a unique and accurate address. I do recognise that the modification doesn't come without a cost…clearly GTs currently fund the provision of PAF information, the address query process and in some cases the existing licence fees for the use of the UPRN and AddressBase Products. Those costs are no doubt recovered from customers through the transportation charges as part of the allowed revenue and the supplier tariffs, so we should consider whether the costs currently funded represent an efficient approach, and whether moving to a more centrally procured/controlled use of the UPRN strips unnecessary costs from the industry and improves the address data quality and by extension improves the successful transfer of the correct supply point. The concern over the timing of the allocation of the UPRN to the premise by the local authority and the point at which Ordnance Survey update their records should be mitigated by the timeliness of the Ordnance Survey updates which confirm that the UPRN is anchored at the point at which the premises begin the physical works. From a GT perspective, the MPRN isn't usually requested or issued until there is a service laid which is capable of having a meter attached, and following recent UNC changes – evidence of the existence of a supply contract for the premise (which needs an MPRN). From an iGT perspective, while many developments are planned a long way in advance and the iGTs may issue MPRNs for the proposed development in advance of the ground having been broken, the allocation of the UPRN by the point at which is a meter is to be fitted should ensure that the cycle of 6 weekly updates by Ordnance Survey will allocate the UPRN to the premises well before the proposed confirmation in central data systems is needed, and certainly before occupation by a customer.
Wales & West Utilities Ltd	The potential inclusion of UPRNs (or an equivalent product) in the registration systems of Gas Transporters, Independent Gas Transporters and electricity Distribution Network Operators must allow the gas and electricity industries to continue to hold and maintain unique MPRNs and MPANs respectively.

	It will not always be possible to establish a unique relationship between UPRN, MPRN and MPAN at each Supply Point. By way of example: • Multiple occupancy residences may have one UPRN and multiple MPRNs; • Complex large industrial premises may have multiple UPRNs and / or multiple MPRNs; • Not all premises connected to a electricity network are also connected to gas network (75% in our network); and • Address matching may be difficult for some addresses where different data is held for one or more components of the address, or where different components are held in different fields. The scale and likely costs of the challenge to correctly assign UPRN data to all existing Supply Points must not be underestimated. Any benefits that might accrue from introducing UPRNs to registration systems would have to be not only significant but also certain to be realised if a clear business case is to be made. Wales & West Utilities would need to implement the GB AddressBase data into all of its systems (including an upgrade to our GIS platform) and incorporate the UPRN into our connections system and asset repository to ensure addresses are automatically maintained. For new connections, it may be possible to incorporate the assignment of UPRNs into industry processes, although it must be recognised that: • The time requirements of the process will not allow assignment of a UPRN to drive and define other address data attributes; and • The inclusion of a UPRN within the process will not of itself resolve existing issues with plot addresses and their subsequent conversion to postal addresses. We rarely see the UPRNs at the quotation stage and developer often change the makeup of the properties on their development through the build phase. The industry would need to develop appropriate controls and governance to ensure that the introduction of UPRN data (12 digits) would not in and of itself give rise to new data quality issues.
ElectraLink Limited	ElectraLink would welcome any attempts to enhance the controls around address data in the industry, given the impacts of incorrect and inconsistent address data noted above. Mandating the GTs, IGTs & DNOs to populate the UPRNs makes sense as these parties are the gatekeepers of registration processes. Therefore they hold the most complete sets of address data, meaning that a full update of all MPANs/MPRNs with UPRNs (and any associated data cleansing) is likely to be quicker and more successful than if it was carried out by any other parties. In addition, in the electricity industry the UPRN is already included as a data item in the flows from MPAS to Suppliers, meaning the cleansed data has a route by which it can filter back out into the wider industry for uses in other processes. In gas, the RGMA baseline contains UPRN so the GTs can also pass this information to Suppliers. Many of the issues caused by incorrect address data occur outside of the COS process, and still only a relatively low percentage of customers ever change supplier, meaning that the majority of address data in the industry will remain untouched by this change. While we support the intention to improve the operation of the COS process, we believe that any actions taken to improve address data should work across the whole market. Without a process in place to provide cleansed address data to all participants, the existing issues are likely to perpetuate. Focussing purely on COS ignores the potential impacts of incorrect address data on the success of the smart meter rollout.

Money Saving Expert	No response
switching/price comparison service 2	No response
GTC	We are concerned that the costs of introducing a mandate for distribution and transportation businesses to populate the UPRN field are not proportionate to the benefits of introducing such a mandate. The main costs that will be faced will be with the licencing of the Ordnance Survey product. We have noted in our response to question 4.1 that we do not believe the licencing implications and options have been sufficiently considered. If we consider that the licencing costs will be £174,000 for a single use licence (the only firm cost referenced in the consultation) then it must be considered that using Option A to cleanse address data is cost prohibitive, especially for smaller distribution and transportation businesses. Smaller businesses will be forced to absorb this cost across a portfolio with fewer supply points and imposing such a cost on these businesses could act as a barrier to competition in the gas transportation and electricity distribution markets as it may discourage new entrants and reduce the cost efficiency of smaller businesses. Without due consideration to licencing alternatives, including how costs may be shared or determined on a per MPAN/MPRN basis, we do not believe that the costs are proportionate to new entrants in these markets. Please find some high level analysis in Appendix 1 as to how this may affect Independent Gas Transporters. There will also be costs associated with each individual business that may need to update its meter point systems and it is likely that all businesses will need to develop or procure a system which is able to extract the information required and interface with existing systems to make sense and use of the raw data that is provided by AddressBase. It is anticipated that these costs will not be too considerable in comparison to the cost of acquiring the licence but they are not currently quantifiable at this time. Our licenced businesses adopt connections almost exclusively from the new electricity and gas connections market. Whilst we recognise that there are data quality issues that exist within the new connections arena, we do not believe that there are sufficient benefits with regards to the cleansing of address data in these markets to impose such a mandate. In our experience the UPRN alone is not a robust enough mechanism which can accurately cleanse address data from the new connections market. We believe that the way that UPRNs are allocated for new build premises in the planning stage does not provide sufficient certainty that using the UPRN will provide an effective method of data cleansing until a significant period of time has elapsed in the life cycle of the property (up to 3 years). One of the apparent benefits to introducing the UPRN is so that an MPRN and MPAN can be linked together. We note that in the consultation DECC have already undergone a matching process in this respect and have been able to associate 96% of MPRNs with an MPAN. One of the issues that has been identified is that there needs to be sufficiently clean data already held in registration systems in order for the UPRN to be a useful tool in cleansing data. It is unclear the extent of the problems that faced DECC in matching the remaining 4% of MPRNs to an MPAN but we would question whether this data is currently sufficiently clean to be able to benefit from the use of a UPRN. It is true to say that using AddressBase it will be easier for

	transportation and distribution businesses to accurately update address data on established supply points without the requirement of notification from the customer or supplier directly. This may lead to more accuracy and resilience for cross industry address changes and enable duel, or single, fuel suppliers to accurately link the MPRN and MPAN. It could also reduce erroneous transfers to some extent but this would only update address data with PAF addresses and may not reflect some vanity address changes which are not reflected in the PAF address. One risk of adopting the UPRN as a compulsory field is that if, particularly in the new connections process, the allocation of UPRNs is not robust enough then the UPRN becomes another data field which can cause issues with the quality of address data rather than solve them. We are yet to be convinced of the value of the UPRN in the new connections process and believe that in this area it could have a detrimental impact on the intent of the working group. Another risk of adopting the UPRN as a mandatory field is that the system changes it would require, which could potentially be substantial across industries, are coming at a time where there is already considerable system change happening (Project Nexus, Smart Metering and CRS). There is a danger that if the changes are not fully understood then this could cause impacts on the existing projects as well as not delivering any required outcome of address data quality cleansing.
EDF Energy	Option A would have no additional costs for our domestic and non-domestic billing systems unless Option A requires changes to the structure of flows from industry parties that we receive as a Supplier/Shipper or those that then pass address data to agents. In isolation we are not convinced that this option will make any improvements to current data quality issues. As previously mentioned we do not validate this address and so unless we make any changes we would have no way of ensuring improvements in data quality, i.e. confirming addresses are identical for dual fuel acquisitions. One of reasons we have not previously included such validations being complexity of doing such matching when structure of addresses in both fuels are not aligned.
Northern Gas Networks	NGN accepts there may be some apparent benefits to industry participants as a result of using a single unique identifier at a property level where possible. It is important, however, that GDNs and DNOs are also able to maintain their own existing unique referencing system for individual meter points. There are a number of means of identifying specific geographic locations and we accept that UPRN has become considered a standard for local authorities. Estimates provided through the UNC Workgroup for Modification Proposal 0468 suggest that in a data matching exercise around 90% of existing MPRNs would be successfully matched to a UPRN using data matching processes. This would leave in excess of two million legacy MPRNs that would need populating with an UPRN which would need to be undertaken on a case by case basis. The scale of this activity should not be underestimated. As part of the Address Data Quality Workgroup, a representative of Ordnance Survey acknowledged that the main benefit of introducing UPRN would be the data cleansing process that would be required as a precursor and could take place without mandating potentially significant changes to existing industry data flows to populate and share UPRN data. It is important to ensure that any new obligations take full consideration of circumstances where UPRN for the gas and electricity supply for a single owner/occupier does not match.

	Examples of these could be: • Large sites with multiple meter points which have different UPRNs for different locations within the site. Nether the MPRN, MPAN, nor UPRN may be the acknowledged billing address • Multi occupancy buildings that utilise banks of meters located at ground or basement level, but then feed separately identified dwellings • Multi metered properties with a single MPRN. From these it is clear that there is not a direct one-to-one relationship between UPRN, MPRN and MPAN. For new connections processes as noted above in 5.1 the allocation of a MPRN will need to continue to be undertaken prior to the existence of a UPRN, and therefore UPRN should not be considered to be the primary data item in service identification. At this point an analysis of internal costs has not been undertaken by NGN.
Xoserve Limited	The inclusion of a unique property reference (which could be the UPRN or an equivalent product) in the registration systems of Gas Transporters, Independent Gas Transporters and electricity Distribution Network Operators could potentially contribute to the maintenance of consistent and accurate address data across all stakeholders, but its implementation would not automatically guarantee this outcome. Processes across all relevant industry parties would have to recognise the usage of any unique reference, and consideration would need to be given to associated matters as outlined in the points below: The arrangement must allow the gas and electricity industries to continue to hold and maintain unique MPRNs and MPANs respectively. It may not always be possible to establish a unique relationship between UPRN, MPRN and MPAN at each Supply Point. By way of example: • Multiple occupancy residences may have one UPRN and multiple MPRNs; • Complex large industrial premises may have multiple UPRNs and / or multiple MPRNs; • Not all premises connected to an electricity network are also connected to a gas network; and • Address matching may be difficult for some addresses where different data is held for one or more components of the address, or where different components are held in different fields. The scale and likely costs of the challenge to correctly assign UPRN data to all existing Supply Points must not be underestimated. Any benefits that might accrue from introducing UPRNs to registration systems would have to be not only significant but also certain to be realised if a clear business case is to be made. For new connections, it may be possible to incorporate the assignment of UPRNs into industry processes, although it must be recognised that: • The time requirements of the process will not allow assignment of a UPRN to drive and define other address data attributes; and • The inclusion of a UPRN within the process will not of itself resolve existing issues with plot addresses and their subsequent conversion to postal addresses The industry would need to develop appropriate controls and governance to ensure that the introduction of UPRN data would not in and of itself give rise to new data quality issues.

Money supermarket	UPRN is a recognised authoritative address label. Having this should aid in improving matching quality/confidence of addresses from various sources. It is perceived that this will bring immediate benefits for parties who are performing any triangulation processes on behalf of other parties like PCWs. Addresses change throughout the lifecycle of properties. This is especially prevalent during new builds, where houses get a name of 'Plot 1', which changes at a later date. A unique number that stays with a property from the start, in the case of new builds would be of immense benefit for linking data from multiple sources together. However, timing is everything and delays in assigning UPRN and MPANs/MPRNs and having assignment synchronised will inevitably lead to problems. The number of parties who will need to coordinate is therefore not restricted to those related to the energy industry only. If synchronisation can be achieved, this will certainly increase data quality and ultimately, the customer will benefit. As mentioned previously, a risk that MSM perceives is that the customer may end up directly/indirectly picking up costs in terms of higher prices. A single supplier of the UPRN solution means there is no supplier competition – this is a perceived risk in terms of commercials and again, the risk and danger is that higher costs are passed onto customers. Another area to be considered is updating of historic data with UPRNs. MSMs 3rd party address supplier has had issues matching all ECOES and SCOGES to UDPRN (unique delivery point reference numbers), therefore it is likely that the assigning of UPRNs will not be straight forward as well.
UK Power Networks	UK Power Networks supports breaking down the requirement in Option A into two separate obligations: • To require all network operators to populate the UPRN, for all new connections, by the end of 2018. • To require all network operators to cleanse their existing data set to achieve, say, a 95% MPAN to UPRN match, prior to the end of 2018. The correct use and population of the UPRN will assist suppliers and their agents in visiting the right premise first time and should contribute to the smooth roll-out of the SMIP. As a distribution business we are unable to comment on the costs and benefits for Gas Transporters.
ScottishPower	UPRNs would provide additional validation opportunities within our processes, resulting in less reliance on existing data items such as postcodes. The UPRN will be valuable to the roll-out of Smart meters. For those in-flight smart meter installations, there will need to be consideration for how the DCC will be updated with the relevant UPRNs.
Scotland and Southern Gas Networks	SGN will have to spend a considerable amount of time and money in order to populate its systems with UPRN data. The estimated annual cost for a license to use the UPRN data which is linked to the address is expected to be in the region of £300K - £350k. In addition to this cost we will need to undertake work to amend our systems to hold the UPRN data which is expected to be a substantial cost to our business. We are unable to quantify the cost benefits of using UPRN data at this stage as the validity and reliability of the data would be dependent on local authorities ensuring that data is updated and passed onto companies such as address base in a timely manner. If the process of

	generating and updating the data isn't a timely one then industry parties may find themselves experiencing the current issues. It is worth noting that a number of local authorities charge developers for updating plot to postal address information which may deter developers from submitting address changes even though they are obligated by law to provide these updates, therefore the source of the data that is provided to post office may not be made available. Examples of local authorities who charge people for making address amendments are Bournemouth City council and Richmond council. SGN believe that the main benefits of both gas and electricity industries using UPRN's will come for those people who have dual fuel accounts. In theory these people will now have a consistent address across both sectors which may improve supplier billing etc. As suppliers and those people with dual fuel accounts stand to benefit from any potential changes we believe that this would be better administered through the Central Registration Service, once in place, as they will have the ability to interface between the two energy sectors.
British Gas	We do not foresee any costs to us based on there being no supplier engagement. Option A will provide a standardisation between gas and electricity which is beneficial. There is a significant risk of UPRNs not being allocated correctly to existing supply points. The associated costs for supplier to manually work address exceptions will still exist – However it is anticipated that they could be easier to resolve.

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.

Respondent	Response
National Grid Distribution	N/A
SmartestEnergy	We would be against mandating the use of UPRNs in anything other than Smart meter flows, and even then we have severe reservations about it. The licensing and system costs would be prohibitive for suppliers in the non-domestic market which does not have particular issues with addresses or switching. We would note also that such costs would be a barrier to entry for small suppliers in the domestic sector.
Northern Powergrid	We believe this question should be directed to suppliers who are more familiar with the wider industry processes and the costs of change of agent and change of supplier.
Power Data Associates Ltd	The licensing issues and costs will become an issue for switching sites. Providing a barrier to entry. If electricity and gas adopted a common address format then this would mitigate many of the problems.
ESP Utilities Group	To be effective, every party must hold a license to view the UPRN address. If not, a previously verified UPRN address could be amended by a party without a license, matching it to the data received from the customer. This would then render the previous parties' UPRN-validated updates as null. When the supply point changes hands, is the newly responsible party able to raise a challenge to the assigned UPRN? Clear rules need to be put forward in regards to the ownership of the address data.
ESP Electricity Limited	To be effective, every party must hold a license to view the UPRN address. If not, a previously verified UPRN address could be amended by a party without a license, matching it to the data received from the customer. This would then render the previous parties' UPRN-validated updates as null. When the meter point changes hands, is the newly responsible party able to raise a challenge to the assigned UPRN? Clear rules need to be put forward in regards to the ownership of the address data and the UPRN assigned.
Scottish Power Energy Networks	**Costs**: We are currently moving towards embedding this in our existing processes, and as such over and above the cost to purchase the data we have a small number of FTE working on data analysis and cleansing. At an industry level the costs are high as each individual party has to

	purchase the data independently. We believe that the costs will be significantly more if other parties are required to purchase licenses to utilise the data **Benefits**: We believe that the ability to share this information with other parties in the industry would further benefit the data quality in the industry. We believe that in the absence of one central body that there are some parties in the industry that have a 'dual fuel' view of the majority of properties and could assist in the further in the data cleansing work **Impacts**: We believe that there may be a positive impact in extending the use of UPRN to the wider industry, as the Networks only have their own view of the properties, where the Supplier and their agents generally have a wider view. We do not believe that the UPRN should be the main data source in the transfer process at this point, as there is no evidence to demonstrate the quality of the data linked to this in the Industry. We believe that this may be an option for the future, but that it is too early to ensure that all parties are bought into the process **Risks**: We believe that there are risks in ensuring buy in from all parties in what may be a short lead time We believe that Option B has the better propensity to resolve data issues, but may require all parties to work together to ensure an accurate resolution to data quality issues, this may be a longer term solution following the bedding in of the utilisation of UPRN's by DNO/GT/IGT, and the delivery of the Single Service Provision due to be delivered in the Gas Market. Similar to 6.1, we have yet to see UPRN data in operation and it remains to be seen how Developers will conform to the use of UPRNs. There is a risk that UPRN becomes another data burden on the industry and provides no actual tangible benefit.
GB Group plc	**Consideration of Option B** **Benefits** Having correctly matched supply-point addresses to AddressBase, the sharing of UPRNs to the wider industry would realise further benefits to the switching process. For participants who are bringing gas and electricity data together, including suppliers, agents and switching sites, the presence of a UPRN confirms that an address has been matched by the GT or DNO and can be used to merge the addresses into a single record containing the gas and electricity meter details from both sources. This removes the requirement for the retailer, agent or switching site to undertake any form of address matching between the gas and electricity addresses – it is simply undertaken through a numeric key lookup. Where gas and electricity addresses do not match, but share the same UPRN, further verification may be required although this should be a relatively simple exercise by reference to the AddressBase data. For example, a GT may have applied UPRN 12345678 to Cromdale, Woodfield Hill yet a DNO may have applied the same UPRN to 19, Woodfield Hill. Without access to the AddressBase data, the supplier, agent or switching site would have to trust that both the GT and DNO have applied the correct UPRN despite the apparent discrepancy. However, if AddressBase data is available, then the supplier would be able to confirm that Cromdale is indeed an alias or alternative address for 19 Woodfield Hill and bring together the gas and electricity records. This benefit here then is that the end-user of a switching service does not see their property listed twice: The site designer could present both forms of the address on a single line: "19, Woodfield Hill (Cromdale)". The details for both the gas and electricity supplies can be retrieved easily and a dual-fuel switch made without ambiguity. Triangulation of this nature is always needed at every stage to ensure that no one party along

	the switching chain has corrupted or mismatched an address record. Although in general a licence for an AddressBase product would be required for such confirmation, it is conceivable that this could be achieved through 'per-click' charging of online services hosted by a third party and thus reduce the costs that would otherwise be associated with an OS licence and the overheads of maintaining an updated, in-house copy of AddressBase. **Risks** *Potential increase in erroneous transfers* As discussed above, without access to AddressBase data or to a third-party data processor, the supplier or switching site has no option but to trust the address matching undertaken by the GT or DNO. An error in this matching process has the potential to propagate through to the data flows and to exacerbate the occurrences of erroneous transfers. The distribution of UPRNs to the industry could help to mitigate this risk. However, there would be an onus on the switching site, retailer or agent to check that the UPRNs are indeed correct before merging gas and electricity records together. Alternatively they could merge the records by matching the address data themselves or indeed utilise the services of a third-party to undertake the MPAN/MPRN merge, as many switching sites and suppliers do currently. The issue of trust is important: Because of the serious implications of erroneous matches of their supply-point properties to AddressBase, the GTs and DNOs would naturally come under pressure to demonstrate that the match-levels of their data meet with industry expectations. Indeed, this may trigger the requirement for independent auditing to ensure that the address matching (and appending of UPRNs) meets with agreed levels of confidence. **Costs** The costs to the industry of the distribution of UPRNs over and above those discussed for Option A, are relatively low because of the free-royalty agreement from OS for the distribution of UPRNs (The AddressBase agreement allows for UPRNs to be distributed but only with the original version of the address. No other address attributes, nor the 'cleansed' version of the address which is regarded as OS IP, can be distributed without the recipient subscribing to their own AddressBase licence). The solution could potentially bring significant savings through the improvement of address quality as discussed in Option A as well as the ability to simply and confidently merge gas and electricity addresses together. However, the quality control processes required to be implemented by all industry players to ensure correctness of data and to engender the required level of trust of data matching, will themselves necessitate a level of investment although again this is not likely to be significant. If industry participants wish to use the UPRN as a key to retrieve further data from AddressBase, then full OS licencing will be required by the supplier, switching site or agent. The costs of doing this may be prohibitive for some smaller organisations and as such may disadvantage them relative to the larger players in the market.
UCL Energy Institute	Provided it was correctly managed and good quality assurance was carried out then this seems a sensible progression.
Switch Gas and Electric Limited	As 6.1
First Utility	It could assist the [long-term] reduction of erroneous transfers and thus improve the customer

	journey and build confidence in the energy industry. It could define a change in the switching process and mandate suppliers and switching sites to use UPRN in the confirmation of new business. This option only serves as a long term plan as this would require multiple code changes across the gas and electricity industry. Suppliers would need to allocate resources to system changes to manage any change in customer switching. We are concerned that it would not however, suitably challenge the industry to cleanse address data issues at the present time which should also be addressed in order maximise the potential utility of Option B overall.
Western Power Distribution	No comment
Flow Energy	Option B would undoubtedly provide greater benefit and flexibility over Option A as each party would be able to independently to validate the data from the same data set. However the possible costs (especially on a per company basis) would outweigh any potential benefits over Option A. This is especially true for small suppliers who lack the economies of scale of the large suppliers and could create a major barrier to entry. If a group licence could be arranged that would significantly reduce the cost we would be interested in reassessing the situation.
Fulcrum Pipelines Limited	Sharing the UPRN's to the wider industry could only work if it were managed via a central data registration point that was responsible for validating & managing any attempts to get the address changed. This would then be distributed to all parties, i.e. transporters, shippers & suppliers. With regards to the switching process, this may only be beneficial after years of implementation as the general public will have no idea of a UPRN and therefore would not provide any benefit for the existing market unless there is some way that the switching process offered the public a simple guide as to how they could obtain their existing UPRN. Option B may help reduce the volume of poor or inaccurate data but it would not address cross meter situations which can be caused by third parties, e.g. developers and the gas engineers who install the pipework after the meter to the property.
Utilita Energy Ltd	We believe that the consistency of approach here is beneficial but see many potential risks. The additional layer of complexity that is introduced by a UPRN in addition to MPxNs is not ideal and will most certainly increase data mismatch issues. The largest risk would be the rigidity that this new process could introduce to the industry. If a supplier needs to update the address data based on a customer request (e.g. customer names their property) what would be the time frames for the PAF data We again stress the point that the expense of the system to use this should not be underestimated and echo the points made in answer to question 4.1.
Electricity North West Limited	Again Option B would be a positive impact from our point of view and benefits would justify licence costs. Excluding licence costs we expect costs to be in the order of £150k
Switching/price comparison service 1	**Costs** Responsibility for identifying the correct meter or address information could shift from suppliers, making accountability for errors fuzzy.

	Benefits PCWs/TPIs can be more confident that the address or meter information they send to suppliers is accurate. However this does not guarantee complete accuracy. A unified approach to address identification across the industry will facilitate faster switching and reduce erroneous transfers. **Impacts** Suppliers, agents and switching sites would need to update their systems to facilitate this extra information **Risks** Having a further source of information on an address may make identifying the correct information easier, but it does not guarantee total accuracy.
SSE Energy Supply Limited	The purpose of the UPRN is primarily to serve councils in ensuring buildings can be taxed. This does not assist Suppliers billing metered Supplies, particularly where a premise has not had a UPRN allocated. So the use of this product would not be advantageous in all scenarios. MpxN's are already unique numbers and the UPRN would be an additional unique number for customers to offer during the switching process. The MpxN's are printed on energy bills, and unless the UPRN is added to the energy bill is unclear how customers would be able to identify and provide their UPRN to ease the process. Additionally the UPRN does not have a check digit which removes the risk of transcription errors. The MPxN is a key to indicate where the ECV or cut out is for each fuel; however the meter may not always be located at the property for example in flats, where there are meter store cupboards. If the UPRN is used within the switching process itself, a checking mechanism would need to be implemented to ensure only the correct address is used.
RWE npower	Further to the overall view of Npower stated in 6.1, which indicates greater interest in Option A, rather than Option B, please see below for responses from our different segments. Although we recognise that Option B could very well be a potential solution, with benefits, taking into account the overall business perspective, we are not willing to proceed with this option at this time. **Domestic:** Costs would be higher due to software licencing and additional data storage. Cost of implementing new UPRN data into SAP & other operational systems. Risks would be inconsistency of implementation across wider industry. Burden of cost potentially higher for smaller suppliers, therefore harmful to competition. Inability to complete option B in advance of 2016 DCC Smart meter deadline. Customers with billing and service issues, would experience benefits of improved address data quality (not just those passing through the centralised database e.g. change of supply). Option B is more comprehensive in addressing the issues described in question 5.1. and customer would benefit more.

	Npower Business: Main benefit would be being able to combine Gas and Electricity meters at the same site which you would be able to do with UPRN without need for the AddressBase product. Also, the fact that the address stays visible (it doesn't just become UPRN and MPAN / MPRN), is good, since address is what the customers are most familiar with. There are probably easier ways of achieving the above link between MPAN / MPRN at same location. Concerns would be that this does not deal with the "meter room" type scenario where all the meters would have the same UPRN despite relating to different properties. **Npower Business Solutions** Please see comments to question 6.1. Currently we have 'no appetite' within Npower Business Solutions to enter into commercial arrangements to purchase 'address packages' – for the reasons outlined earlier.
E.ON	Option B assumes that other market participants need to receive the UPRN, but to carry out any validation of the correct assignment of the UPRN, they would be extension also need to procure a licence to use AddressBase products. This would put a significant cost on all parties, not just in terms of the licence fees, but also in terms of the system changes they would need to make to both their own and in central systems. This would likely require significant changes to industry data flows, and not just for transporter and DNOs, but also shippers, suppliers, MAMs, MAPs, MOPs, and possibly meter readers, data collectors and data aggregators, and may additionally require further changes to other central systems such as those owned by ElectraLink and the Balancing & Settlement Code too. While an argument is being put forward for the supplier to validate that any dual fuel registration is linked by the use of a single UPRN, it can equally be achieved by both registrations address matching exactly. If the same source is used for the data population of the address fields in both the supply point registers for gas and electricity – then the addresses will, by default be an exact match. If the transporter or DNO incorrectly assign the UPRN to different premises, the matching of the address in the central registration system will highlight the differences in the assignments of the UPRN, and these can then be checked using the spatial data. In trying to improve the address quality of the meter points, this seems a more pervading change, which will generate a lot of system development (and cost) for all market participants, while those costs are being ultimately recovered from customers. This seems on the face of it, a very expensive option and before a change was progressed a detailed cost and benefits case would have to be developed to make the case for this level of change.
Wales & West Utilities Ltd	Any proposition to extend the use of UPRNs must be subject to its own cost benefit assessment for comparison to that for Option A, in order to test if there is any incremental net benefit in a wider application. This needs to take into account the implication of changes to registration systems as a result of the introduction of the Central Registration Service. All parties within the data chain must hold consistent data and apply it consistently during all phases of the property lifecycle in order for benefits to be realised. Shippers should reconcile the address at which they are billing for gas against the MPRN address record and ensure the

	two are consistent.
ElectraLink Limited	By extending the use of UPRN to all participants, in theory you would pass the benefits of auditable address data to all processes that require this information, rather than limiting it solely to registration. The UPRN itself may be of limited value in the switching process, as it relies on the associated data being correct in participants' systems, and as few customers are likely to know their UPRNs as they are their MPANs/MPRNs. Therefore it would need to be implemented in conjunction with overall improvements to the address data – which DNOs/GTs are still probably best placed to achieve. So this data would need to be disseminated across other market participants. This would not be a simple solution, given that only a limited number of flows that communicate address information currently include UPRNs, therefore changes to the DTC and participant systems would be required. For gas, NOSI would also need updating to incorporate UPRNs. Ultimately, however, the effort expended now may ensure the best quality address data is available during the mass rollout of smart metering and to aid a transition to one-day switching and central registration.
Money Saving Expert	No response
switching/price comparison service 2	There will always be cases where a customer won't recognise any of the addresses we offer as their address and so will have to enter their details manually, often when their view of their address is different from the address held on file by Royal Mail. Fundamentally, an address should be a unique identifier of a property. Requiring a customer to potentially know, in addition to their MPAN and MPRN which are already obscure and difficult to obtain unique identifiers, a unique identifier for their property would act as a significant barrier to switching. Additionally, we believe customers will struggle to understand why an additional address identifier is necessary. Additionally, the information that suppliers require TPIs to gather from customers during the switching process has increased significantly over the past few years. Questions which are not necessarily vital in order to process a customer's switch, such as preferences towards plan extras, paper billing, residential status, marketing consent etc, are mandatory and have made the switching process significantly more onerous. The introduction of another data point, even an optional one, in the form of a UPRN further complicates the process and increases the barriers a customer faces when switching. We have seen a decrease in the proportion of consumers willing to complete their switching journey directly related to this increase in questions asked, and it may be that any cost saving or reduction in number of erroneous transfers is actually outweighed by the negative impact the change will make to the number of consumers switching. Further a customer who understands the MPRN/MPAN system can find these numbers printed on their meter or on their energy bill, and provide them at the point of switching. However, the UPRN would not be physically available to customers anywhere within their property, making it less likely that they would be able to provide this. The problem would be further emphasised for customers who are moving house or have recently moved house and who may not yet have possession of their new property's unique identifier. Moving home is a strong trigger to switch and homemovers make up approximately 20% of our userbase. In cases where the information was not automatically available to a

	switching site, if the customer was prompted for information they did not have to hand they may be dissuaded from completing their switch. Ultimately, there appear to be two distinct needs for address information in the switching process. The primary requirement is for triangulation and to establish which meter should actually be switched. The secondary requirement is for billing and customer correspondence. Based on the switch journey described, the key barriers to a switch are: • Customer's postcode is 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. • Customer inadvertently confirms switch. • Customer picks wrong address from list. • Customer picks right address but the wrong MPAN /MPRN is assigned to that address. Additional barriers include, but are not limited to: • Customer's address is not in a list of addresses and is typed manually by the customer. This entered address cannot be automatically transformed into a format suitable for their chosen supplier's systems • Customer enters the wrong property number for their previous or second previous address, or one of those addresses was not in the UK, causing them to fail a credit check for their new supplier Of this list, none of these problems can be solved by the introduction of a UPRN. The only case in which a UPRN can improve the quality of data transferred between a TPI and an energy supplier is when the address the customer wishes to switch is known and can be selected from a list, in which case transferring a URPN could reduce problems translating addresses to the format required by the supplier. This is not currently a significant barrier to switching, however, and as mentioned is not a major source of errors. Finally, the potential incremental cost of sourcing UPRN data for TPIs would be prohibitive at the quoted licensing cost of £174,000, and would certainly limit new entrants or innovation in the market.
GTC	We believe that the benefits provided to customers by including the UPRN as part of the switching process are likely to be limited. As the consultation paper notes it is unreasonable for a customer to expect to know the UPRN for their property and, therefore, it is only in limited circumstances that this could be used to increase the accuracy of the switching process directly. The ADWG has questioned the value of adding another long numerical code to the switching process which already contains the MPAN and/or MPRN and we would echo this concern. We believe that a customer in the scenario of wishing to switch their supply is far more likely to know, or have ready access available to, their MPAN or MPRN than their UPRN. The only way that the introduction of the UPRN within industry flows would have any real benefits in the switching process would be if the UPRN was "stamped" on the property or the property documents from initial title registration. There would still be more work required to ensure that there is a secure and robust process to facilitate switching. Providing UPRN information to suppliers may have some incremental benefits in relation to the address data quality cleanse as it will allow the suppliers to check the quality of the address data. This is only the case if suppliers have access to the same UPRN database as they will need access to be able to cross check data themselves to usefully cleanse the data. The costs associated with licencing on an industry wide basis are substantial and in the end these costs

	will inevitably be borne by the customers. We have raised concerns in our response in section 4.1 that the licencing implications have not been fully considered and we believe that this is something that requires attention before it is possible for suppliers, and therefore customers, to derive a cost efficient benefit from the receipt of the UPRN information. Until such time as an effective and efficient means of licencing the UPRN we would be unable to support Option B. We are unable to comment on the benefits that suppliers could realise in respect of the being able to match customer premises on various government schemes such as those that have been listed in the consultation.
EDF Energy	In our B2C and B2B SME system if UPRN is provided to us by MPAS we will pass the UPRN to our agents on the D0131 data flow. We would have to make system changes to do so for gas and this will incur costs (not yet assessed) but we are uncertain whether this would have any benefits for our agents. We can see potential benefits of using UPRN to validate on dual fuel contracts, subject to the following points. We would need to ensure that data can be made available on demand to relevant parties as part of any initial contract validation process, e.g. switching sites. We feel that this is an option that requires further investigation as to if that can be made available to all relevant parties and not just Suppliers/Shippers. We would also need to consider potential costs for that provision and in particular if/how this would be used by switching sites. We also feel that this would require a consistent address format to be used on both fuels and are not convinced that this would be a cost effective option until we have a single central registration system. This would need to deal with situations where multiple MPANs exist for premises either as related MPANs or non related MPANs and that parties had data that helped them differentiate each case. For example, import and export MPANs that can be traded separately are likely to have same UPRN but parties would need to know which of these is to be transferred. For related MPANs it is possible that those related MPANs could have different UPRNs, for example a farm and out buildings. In order for that transfer to progress without issue we would need a process that could pick these up for a Supplier to ensure correct customer journey. In effect in picking out a, for example, farm using a UPRN if there is a different UPRN that has related MPAN then this would need to be known.
Northern Gas Networks	Further analysis would need to be undertaken of specific proposals to assess these costs and benefits at an industry level.
Xoserve Limited	It would appear that Option B may have the potential to enable the industry to benefit from all stakeholders having shared access to a master set of address data built around UPRNs. It would be important that all parties within the data chain hold consistent data and apply it consistently during all phases of the property lifecycle in order for benefits to be realised. Any proposition to extend the use of UPRNs must be subject to its own cost benefit assessment for comparison to that for Option A, in order to test if there is any incremental net benefit in a wider application
Money supermarket	There are a large number of parties that would need to be coordinated regarding switching on a UPRN solution. Either all have to come online simultaneously or there will need to be solutions in place to cater for existing and new systems in parallel. This is potentially costly and needs to be further

	considered. The likelihood of all parties being able to make changes at the same time is low. This will be complex to manage. Switching is perceived to be easier if the data is joined using an additional unique id – UPRN should allow this if all parties have synchronised data sets. UPRN will aid multiple parties who are joining Gas and Electricity industry addresses and therefore raise data quality (the underlying issue). If this is proven as a trusted mechanism, data matching can be significantly simplified. This may mean that some parties who are currently part of the data chain may not be required and much needed streamlining can occur. Where there are 3rd party suppliers of the data (as used by MSM), UPRN will aid with their current triangulation processes. MSM may also be able to make use of UPRN to aid the customer choose the correct address, however it is perceived that the data quality and matching activities are done by their 3rd party data supplier as they have the expertise in this area. Where a customer has to manually enter an MPAN/MPRN, a UPRN check should highlight if an electricity and gas address is different. MSM would have another unique id which they could use to both help the customer navigate through this mismatch as well as highlighting an underlying data problem early in the switching process.
UK Power Networks	N/A
ScottishPower	This would provide additional benefit in the sales process, as the UPRN could be used as an additional validation step as part of sales through broker sites. There would also be the benefit that this would allow for gas and electricity sales to be processed as 1 through the use of the UPRN. There would be costs to implement system changes to accommodate this data, which would require assessment. There is a risk with implementation of any changes whilst ongoing industry changes are currently in progress to implementation, such as Project Nexus, P272 and Smart Meter rollout. The introduction of any additional change during this time would present a significant challenge to the industry to implement.
Scotland and Southern Gas Networks	Mandating an industry wide single source of address data for Gas Transporters, Suppliers and Switching Sites would ensure that address data is consistent across the board. Whilst mandating industry parties to use a single source of address data seems to be a sensible solution to improving the consistency of the data that is held, we must be mindful that the costs could prevent small industry parties from operating. A single address source may help to reduce erroneous transfers where parties have a different view of an address which should be a benefit to the industry. The use of the UPRN will be limited in the switching process as the vast majority of people will not know what a UPRN is and if they have heard of the term UPRN most won't know how to obtain such a piece of information. SGN believe that the switching sites should use MPRNs in the switching process as these are included on customer bills currently rather than introducing another number that people are unware of and isn't contained on a customer bill. Using MPRN's in the switching process rather than just the address would be a valuable way of ensuring that the correct supply point is being targeted during the

	switching process this would no doubt help to reduce the volume of erroneous transfers without expensive system changes.
British Gas	Cost for BG of option B based on limited information are in the £4-8M range. This covers changing the address checking software, changing the CRM systems and retesting the industry flows in two billing systems. Tests within British Gas have shown that address base offers minimal benefit for data quality (based on like for like testing of data sets e.g. Address Base and PAF)

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.

Respondent	Response
National Grid Distribution	No other solutions identified
SmartestEnergy	Standardise to the SAF or do nothing. Another solution might be to conduct an Industry audit on ensuring addresses are being used/updated correctly.
Northern Powergrid	We believe that consideration should be given to the benefits that might accrue from mandating the use of postal addresses at new connection/MPAN/MPRN creation (rather than plot addresses). This could make a significant contribution to resolving plot to postal mapping issues and should reduce cross meter issues which are often a result of plot addresses. Although customers and house builders might have some concerns about transition to this, we can see there may be wider merits in considering this across gas and electricity. In terms of the labelling the Meter Points/Supply points, as set out in the Address Data Quality Working Group report, we believe further analysis should be undertaken to understand the associated costs and benefits (we are aware that this has been considered and rejected previously). The mandating of postal addresses at new connection/MPAN generation should significantly reduce any perceived benefits from the labelling of meters as there would be further clarity on the supply point address in question.
Power Data Associates Ltd	In my role of consultant for the AMO I proposed and advocated the marking of the ECV and cut-out with the MPRN & MPAN. In gas this approach is already required and accepted. The recommendations were to strengthen an existing requirement in TD/4. Whereas in electricity there appears to be reluctance from Distributors to take on another responsibility.
ESP Utilities Group	We believe a key factor in improving address data is the management of the data received from the Developer. For a new site, ESP contracts with the UIP (Utility Infrastructure Provider) who often complete their work on site before postal addresses are allocated. The contract between developer and supplier is key, we expect suppliers to mandate the developer to supply postal addresses at site completion and believe in turn these should be passed to the transporter to update their records and the subsequent Data Enquiry Service. Labelling the ECV is beneficial only if these labels are assigned correctly in the first instance. From experience we have known these to be swapped, misplaced or mislabelled which creates more confusion for the end user, and increases the risk of ETs occurring.

ESP Electricity Limited	We believe a key factor in improving address data is the management of the data received from the Developer. For a new distribution network, ESPE contracts with ICP who often complete their work on site before postal addresses are allocated. The contract between developer and supplier is key. We expect suppliers to mandate the developer to supply plot to postal addresses at site completion and believe in turn these should be passed to the distributor to update their records and subsequently MPAS and ECOES. Labelling the meter itself with an MPAN is beneficial only if these labels are assigned correctly in the first instance. From an electricity perspective, labelling the meter with the MPAN would not prevent poor address quality in some instances. For example, in multi-occupancy dwellings with interior risers routing the cable from a meter in a basement to the customer's flat, labelling of an MPAN could be misaligned due to the cable in the riser being misdirected on its path through the building – again producing a crossed meter situation.
Scottish Power Energy Networks	We believe that there is a requirement to review the outputs of a Network matching exercise with the UPRN, before any meaningful solutions should be progressed.
GB Group plc	**Solution C: The Adoption of New Codes of Practice for Address Management** The improvement of address quality will arise from a number of changes to the way data is managed throughout the industry. Whilst the appending of UPRN to transporters' and distributors' customer addresses will help to bring significant benefits, the real improvements that will lead to next-day, error-free switching, efficient smart meter rollout and accurate new-build registrations are only likely to be realised over time through the introduction of new processes. These are likely to include: • The cleansing and merging of existing gas and electricity data; • The establishment of codes of practice to ensure that the industry data is regularly maintained and at all times, correctly reflects the property changes occurring in the real world; • The use of approved address matching software tools; • The use of one or more high quality address references to allow the appending/validation of keys such as UPRN, grid references, classification codes etc.; • Collaboration between industry participants to enable the free-sharing of data; • The establishment of codes of practice to ensure that planners, builders and supply-point installers follow strict processes for new-build properties and prevent plot-addresses from 'slipping through the net'; The momentum of change will engender other improvements such as the attachment of contact information: It should become standard practice to include consumers' names and telephone and email details to allow pro-active notification of power-outages, gas leaks and pipeline and cable maintenance. In particular, the adoption of this solution will help to bring about: • The alignment of gas and electricity address data; • The resolution of the plot-to-postal problem; • The improvement of ambiguous sub-building (flat/apartment) details;

	• Elimination of new-build problems; • And as a consequence, the reduction in the number of erroneous consumer switches;
UCL Energy Institute	Not qualified to comment.
Switch Gas and Electric Limited	N/A
First Utility	The questions and responses generated in Section 6.1 and 6.2 only serve to assist a long term aspiration of cleansing address data. The industry also requires a short term effective robust plan to tackle the issues we have today. We believe that switching sites could assist in improving the transfer process. These sites currently use the standard PAF (Postal Address Format) for any enquires and subsequent transfers through their websites. We propose that switching sites should be able to utilise the extracts from UK Link and MPAS. The switching sites should use the address data from these sources where a customer wishes to transfer their energy supply. The old supplier is still accountable for updating correct address information and should be responsible for assisting a customer to transfer energy to a new supplier. We believe improved governance is required and enforced.
Western Power Distribution	No comment
Flow Energy	No response
Fulcrum Pipelines Limited	Labelling supply points can be beneficial but only if suppliers instruct customers to check their meter installation to see whether there is a label attached in order to obtain the MPRN. It can also make it more difficult for the industry because any evidence of crossed meters means that a follow up visit to the property is required in order to replace any incorrect labels. Unfortunately labelling the ECV at construction stage does remove the potential for crossed meters. For example, at the construction of a pipe manifold, the developer may insist that a specific ECV is going to supply a specific property, i.e. the first ECV will be used to supply Flat 1 and has the relevant MPRN label for Flat 1 attached. However, if the gas safe engineer then lies the outlet pipework to Flat 8 because it is an easier route then we still have a crossed meter scenario. Another solution may be a marketing drive on the developer community or adding something into the Building Regs to stress the importance of providing postal addresses & UPRN's rather than just plot addresses. The industry could then implement a ruling that MPRN's will not be issued (by any party) and the meters will not be installed until both of these items are provided by the developer / customer.
Utilita Energy Ltd	We believe the solution should be simpler and ensure that both GT and MPAS data are updated to PAF data. The UPRN should be held by both so that it can matched by each party. This provides a consistent approach that should not incur prohibitive costs. We see very little benefit in labelling Meter Points with supply point numbers. We believe that

	going forwards there are far smarter ways of providing this information to them, for example via IHDs, QRs and Phone Apps. Therefore the addition of a label in a potentially difficult positon, although not harmful to the aim does not seem to provide great benefit.
Electricity North West Limited	Not aware of other suitable alternatives to address this issue.
Switching/price comparison service 1	Energy suppliers are obliged to inspect meters on a routine basis (every 3 years I think, with derogation to 5 years for British Gas). Could these inspections come with a responsibility to confirm address information and report back to the CRS? This could be a low cost option in terms of cost of labour, however it would mean that information comes from many different sources and therefore the reliability of information returned and correcting any mistakes could become a cumbersome task. Also, 3 years is a long interval. Labelling Meter Points/Supply Points (ECV) with the MPAN/MPRN seems very sensible. Between now and when smart metering is in full swing this would help reduce erroneous transfers.
SSE Energy Supply Limited	Anything that helps the industry improve the address data quality should be seriously considered. Labelling / stamping meter points / supply points are definitely worth considering. If adopted, it would benefit the registration of new build supplies initially if successful could then be cascaded to existing supplies. Taking the details off a label located in the customer's home removes any possible errors presented through data quality or national databases. Quality problems could then be remedied after the registration process. Stamping / labelling provides a 'static' reference to the property. UPRN's and MpxN's do not remain static as plot numbers are confirmed as proper postal addresses and as energy suppliers are already supplying premises when these are confirmed, the resultant impact on consumers will be reduced. The UPRN cannot provide this benefit.
RWE npower	Improving the ability of suppliers to raise address changes in parallel or prior to registration. Introduce the relevant flows to update address details (maybe confirmed by meter reader at next read) and made live then. To reduce ETs, to label meters with MPAN / MPRN so we are not relying on other data to infer what the MPAN / MPRN is. A GT/IGT run address cleanse would be beneficial to the industry to cleanse the current data, as UPRN would not solely solve the current issues. Within the meter technical details, introduce a "GSP" co-ordinate field, where market participants could share known co-ordinates for the actual meter location.
E.ON	We have put in place more controls around address checking during and immediately post the sales activity, and we would encourage other suppliers to do the same. We believe that the labelling of the supply points will do little to improve the address data quality, what it will separately achieve is the more accurate recording of the Meter Serial Number to the MPRN or the MPAN, and lead to fewer situations where meter information is crossed over multiple supply points. This could be achieved at the point the meter is installed or even moved…if the meter point were labelled with the appropriate supply numbers, the RGMA or meter information flows could be updated to require the meter worker to record the

	meter point reference numbers in the data flows – not just accept a default population of the assumed meter point number.
Wales & West Utilities Ltd	Wales & West Utilities would be reliant on data tools to match Xoserve addresses to BG AddressBase and hence the UPRN. WWU have over 2.5m meter points. A data matching exercise would allow matching of say 90% with fuzzy logic leaving 10% or 250,000 unmatched addresses. Prior to this, the Shippers should reconcile their portfolios of sites against the MPRN address. This would immediately update thousands of plot records to full postal addresses and well as flat addresses and sub buildings within multiple sites. However, for the CRS system, further checks to the MPAN data would be required as the MPRN and MPAN may be recorded under different variants of the address in the respective registration systems. Wales & West Utilities already have a business process to label ECVs with a MPRN label. This however is removed or switched by meter installers, developers and customers. We still see meters registered against the wrong property and MPRN, even when labels are in place.
ElectraLink Limited	**Enhanced Validation** As mentioned in 3.3, the architecture of the DTN is such that we can access the contents of the data flows to carry out validation as they are transmitted, with no impact on security or the quality of service. At present, the available validation is limited in scope, but this could be developed to be much more sophisticated and help improve the data quality held by all market participants. For example, it would be possible for the DTS to compare any flow containing address data (including UPRN) and triangulate it against AddressBase and/or ECOES and where the data is invalid, inaccurate or a key item has changed from previously transmitted data, the DTS could reject the flow, or raise an exception report for the Supplier/DNO to investigate. This would allow the industry to proactively manage the quality of its data. It would also be possible - with appropriate industry governance in place - to correct any incorrect data before the flow is delivered to its intended recipient, thus making the data cleansing dynamic and removing any need for participant input. In order to provide incremental costs for adding enhanced validation of this type, we would need to produce an Impact Assessment, which could be requested via the DTS User Group. Address validation would also be possible for RGMA and NOSI files, but would need agreement on how inconsistencies should be reported as there is no current centralised validation to build on. **Additional flows** The DTC currently includes a data flow D0222 which lets agents notify the Supplier of any changes to customer details that are identified on a visit to the customer. With MOP visits to nearly every property in GB to be conducted before 2020, this could be a good source of real-world validation for any address data provided to the Agents. In the white paper, we recommended that this flow be changed so that it could also be used by the Suppliers to notify DNOs of any address mismatches. Additional flows could be developed for the gas industry to fulfil this process. As already mentioned, ElectraLink already connects many of the participants in the gas market, so could develop this as part of, for example, the pre-existing NOSI or

	RGMA services.
Money Saving Expert	No response
switching/price comparison service 2	For TPIs, direct access to ECOES or other industry data sources would be invaluable. Further, if suppliers and TPIs have access to the same data, the consistency of address data across the process is likely to be much higher, and the data captured during the switching process is more likely to match the data stored by the supplier, also further reducing occurrences of errors. Additionally, TPI's are forced to rely on determining meter numbers from various third parties because consumers would struggle to provide this information themselves - they don't know where to find their meter number, further hindered by a lack of understanding of the format of the data required. If meter numbers were more obvious, were referred to in a ubiquitous, consistent way and were in the same location on every supplier's bills and therefore easier to find, it would go a long way to allowing customers to confirm that the correct meter was being switched. This would also reduce the need for triangulation as it would be rare for a customer to either enter or confirm an incorrect meter number
GTC	We believe that an investigation into industry approaches and processes to the way that address data is handled could prove beneficial to the quality of address data held. If there is a more robust process that can be identified which includes all industry parties then this could result in address changes or clarifications being dealt with more efficiently than current practice. Labelling the Meter Points/Supply Points with the MPAN/MPRN is not in itself a particularly efficient way to improve address data quality of existing data but it could be beneficial in the new connections registration process and with the move to CRS and faster switching it will provide the customer with ready access to that information which will enable the gaining supplier to accurately determine the customer information that they should be taking over. If this option is to be considered then the process that is to be used will need to be fully and appropriately considered as any incorrect labelling of Meter Points/Supply Points could cause problems further into the lifespan of the property. This is of particular importance in locations where there are banks of meters such as flats.
EDF Energy	Please see response to question 6.2. Our main view in terms of improving address quality is that both fuels should use a consistent and agreed single address for any premises. We believe that to do so is probably only required where a Central Registration System for both fuels is developed. If so part of that development would be to consider all issues surrounding address information as highlighted in our response to previous question, and those from other parties in response to this consultation. We appreciate that labelling of metering points with MPAN/MPRN could add value for customers however we are not sure how this could be done and if this might only be practical as part of Smart meter rollout. It might also be difficult to keep this data up to date, e.g. if a metering system is amended and a related MPAN is logically disconnected. Processes would be needed for this to be updated on site and passed back to Supplier to ensure correct MPAN is logically disconnected. A similar update process would be required if a related MPAN system is installed. It could be that provision of such data on site is not practical but that customers, and other parties, could interrogate either a web-based front end to new Central Registration

	System or use a smartphone application to get such details, either as part of any triangulation activity or for customers when moving into a new property.
Northern Gas Networks	As described above, other data cleansing exercises are in the process of being undertaken in addition to improvements to business as usual process to establish a culture of all individuals taking responsibility for maintaining data quality. It is not possible at this point to provide costs or benefits other than those noted above.
Xoserve Limited	It may be possible to make improvements to the conversion of plot addresses to postal addresses by changing the data flows between the Local Authority, the Gas Transporter and Xoserve.
Money supermarket	No response
UK Power Networks	Although we do not have any additional solution proposals, if the completion deadline of the SMIP programme is to be achieved then we believe the only way forward is for the industry to have a single address view of the customer.
ScottishPower	The roll-out of Smart meters would provide an efficient opportunity to label all meters with particular information, such as the UPRN. However this would carry a risk of labelling being done inaccurately during the roll-out, unless there is some central co-ordination with strong governance. Also, as meters are removed and installed elsewhere, this information could become misaligned and inaccurate. There is also the option to monitor Supplier performance relating to D0302, D0131 and ONSUP flows. This would require analysis on how best to measure and report on figures, as the performance should be based on quality rather than volume. This could link into the Performance Assurance Framework that is present in Electricity and is currently being established in Gas.
Scotland and Southern Gas Networks	As stated in section 5.3 SGN is now receiving address amendments and updates from local authorities to enable us to update address data held in our systems which is proving to be a valuable source of data. We believe that the labelling of Meter Points with the MPRN has an important part to play in the customer switching process as does the inclusion of the MPRN on customer switching sites as a mandatory piece of information when switching supplier. If the correct MPRN is added to a supply point and is used as part of the switching process then this would introduce an additional check to verify that the correct address is being switched this in turn would cut down the dependence on the address data. If MPRNs were used in the switching process to verify the supply point and the address was logged as a plot address then there could be scope to allow the end user to look their address up via a PAF file this could then over-write the plot address data that is held in Xoserve's central systems.
British Gas	An additional solution would be utilising the MPAN and MPRN. If customers were made aware of the MPAN and MPRN when moving into a property, this could be utilised in the switching process. A customer could use this information rather than the address when switching supplier. The MPRN and MPAN could be included in the EPC energy efficiency documentation that is required for all house sales and lets.

	To gain benefit for any proposed solution a cleaning exercise will be required with defined and agreed processes for address data sharing, updates and changes. A further alternative is to review the options to mitigate the issues presented using Smart Meter Technology which is rolling out rather than adding further cross-reference points (e.g. UPRN's). Modernisation of existing resources (e.g. ECOES and SCOGES) would be an add to triangulation (e.g. API access to ECOES and SCOGES) to facilitate automated matching.

Question 6.4
What is your preferred solution (of those referenced in questions 6.1, 6.2 and 6.3) and why?

Respondent	Response
National Grid Distribution	As described in the document, implementation of option B would encompass all the perceived benefits of option A with the additional benefits as described. Option B would therefore be the preferred solution.
SmartestEnergy	Our preferred option would be one of the options given under 6.3. Our second preference would be 6.1.
Northern Powergrid	Currently, solution B is our preferred solution as it offers a further level of control in addition to the address and MPAN and also provides visibility to the wider industry. It will also support the long-term vision of next-day switching, although we believe the process for updating and sharing the UPRN needs to be carefully considered and defined in detail.
Power Data Associates Ltd	Labelling ECV & cut-out – simple and it not dependent on any other change Use of a common postal address – a common approach would be beneficial. As two are currently in use, some part of the industry would need to change, and this will involve time/effort/cost. Population of UPRN when 'easy' seems logical. But for the reasons stated elsewhere in this response it is difficult to see how it could be universally applied and always maintained as accurate. So stakeholders could use it when available, but not wholly rely on it being correct.
ESP Utilities Group	We believe that further work needs to be conducted to look at how we get to the Blue Sky world of gas and electricity addresses being reliably paired, and how long industry will take to achieve this. Our problems originate from absent data rather than incorrect data. We believe the focus should remain on mandating the data to enter the industry which we believe can be done at considerably less cost to industry parties.
ESP Electricity Limited	We believe that further work needs to be conducted to look at how we get to the Blue Sky world of gas and electricity addresses being reliably paired, and how long industry will take to achieve this. Our problems originate from absent data rather than incorrect data. We believe the focus should remain on mandating the data to enter the industry which we believe can be done at considerably less cost to industry parties.
Scottish Power Energy Networks	Our preferred solution is for 6.1 in the short term, but 6.2 longer term. We believe that the 6.1 solution can be delivered relatively quickly (in many cases this work may have already commenced within organisations) and will provide initial data cleansing. Solution 6.2 will require additional discussion but we feel that this can be progressed in parallel with 6.1. We would not be supportive of a delay in the progression of Solution 6.1 while the Industry

	waits for 6.2 to be delivered, we believe that there is good work that can be carried out in the interim.
GB Group plc	Whilst Solution B (6.2) will lead to significant improvements in address quality, these will however, only be realised through the adoption of Solution C (6.3) Ofgem led initiatives including: • the introduction of new, standardised address-management processes; • the controlled sharing of data between industry participants; • codes of practice to ensure collaboration between industry-related participants such as local authorities, construction companies and installers; Thus, our preferred solution is a combination of Solution B, the adoption of UPRN throughout the industry together with Option C, the introduction of new codes of practice. Both of these incentives must be driven by Ofgem because without strict regulatory controls, the investment needed to implement the required changes may be hard to justify for some participants, particularly the independent transporters and electricity distributors. Whilst these companies possibly stand to benefit less than other participants such as suppliers and indeed the consumers, the adoption of the proposed solutions by all parties is critical to ensuring the overall improvement of address quality throughout the industry.
UCL Energy Institute	To be honest, any improvements to the gas and electricity meter addresses would be welcomed by us, and an accurate match to a UPRN would be extremely welcome.
Switch Gas and Electric Limited	Alignment with the royal mail database because this is the address customer's use for other bills and correspondence. Most address look up software is aligned to the Royal Mail database and therefore alignment with the royal mail database would make the customer journey more seamless.
First Utility	We support the long term solutions highlighted in options 6.1 and 6.2 but they only serve as long term aspirations. We strongly believe a short term project is required actually to cleanse address information. Our response detailed in option 6.3 serves as a cost efficient alternative that could assist short term improvements in address data quality.
Western Power Distribution	No comment
Flow Energy	Until a firm cost for Option B is presented our preference is for Option A.
Fulcrum Pipelines Limited	To implement a regulation into the Building Regs ensure that the developer provides postal addresses & UPRN's rather than just plot addresses. The industry could then implement a ruling that MPRN's will not be issued (by any party) and the meters will not be installed until both of these items are provided by the developer / customer.
Utilita Energy Ltd	We prefer the approach in 6.3 as it is more consistent. We agree that further investigations would need to be made into the potential issues with this approach. For example we know there would need to be a solution to new connections that won't follow the PAF format before they are given an address but we must insure that costs are not prohibitive to the solution for any parties.

Electricity North West Limited	Option B.
Switching/price comparison service 1	Even given the issues that option B (6.2) presents, this option is a good step towards a unique address identifier being used industry wide. To facilitate customer engagement, faster switching and make the most of new innovations there needs to be a universal approach to how related information is formatted and shared.
SSE Energy Supply Limited	Until we have received evidenced cost benefits we are unable to conclude which is our preferred option. For 2 of the options we believe there will be significant roll out costs and possible rollout complexities. We believe that if the meter points were labelled, this would be provide greater benefits to the COS process A cross industry licence for the UPRN should be explored further as should the labelling of the supply points.
RWE npower	As stated previously, overall Npower prefers Option A because of the ease and speed of its implementation.
E.ON	As the proposer of UNC 0468 and iGT056, it will come as no surprise that I support option A. I believe that this option offers in the long term a more cost effective way to improve the quality of the address – which will by extension improve industry address data quality in other industry systems and processes. I think that option B will achieve the same thing, and possibly some additional deliverables, but I think it will be a very expensive alternative solution that the incremental costs over option A and it will not deliver that equivalent level of benefit, so I believe it would be unreasonable to expect customers to fund such an expensive solution. I think option B will also be a barrier for the growth of small suppliers – the costs of the additional licence fees and system development would have to be borne across a smaller customer base, which would risk increasing the overheads of smaller suppliers. Centralising the population of the UPRN in the supply point registers and by use in the central registration systems has to be the most cost effective way to deliver the address improvements that using the UPRN can provide.
Wales & West Utilities Ltd	Wales & West Utilities is not providing a response to this question
ElectraLink Limited	We believe that a holistic view of improving address data would be of most benefit to the industry. While improving the quality of registration data held by the registration agents may help improve their processing times and improve part of the COS process, it will leave other issues untouched, which potentially have a greater impact on costs to industry. Therefore a solution that includes elements of all three solutions would be the best – get the GTs & DNOs to cleanse the data, and populate the registration flows with UPRN, and share all of this information with the industry to improve data held by all parties. The exchange of this information could then validated market-wide on an ongoing basis to prevent significant deterioration occurring.

Money Saving Expert	No response
switching/price comparison service 2	Access to the same data set, as described in answer 6.3, is the only solution which could reduce errors without raising significant barriers to customer switching.
GTC	We do not believe at this stage that we are able to make a judgement on our preferred option as we do not believe that the costs of Option A and Option B have been fully considered and there is more investigation required into the possibility of other approaches. Until such time as a firm and definitive way of licencing an AddressBase product has been fully scoped we are unable to support Options A and B as we do not believe that, currently, this is able to deliver any benefits on a cost efficient basis.
EDF Energy	EDF Energy favours option A in the short term and option B when we move to a Central Registration System. Improved data quality will be beneficial in the short term and enable higher quality data to be migrated into the Central Registration System. However we do not want to make flow and process changes to use UPRN until we move to the Central Registration System. We are not convinced that the cost of amending current systems could be justified as the industry is already moving towards central systems and changes we make to current processes could become redundant quickly.
Northern Gas Networks	Greater investigation around the costs and benefits of each solution needs to undertaken before a clear preference can be made. It is clear that improved data quality has a general benefit, but the impacts on the number of processes impacted would require a detailed impact assessment at both individual organisational and industry level.
Xoserve Limited	Xoserve is not providing a response to this question
Money supermarket	Accurate data is key and a central repository (CRS) is the ideal solution. The transition to this will be difficult and a big bang approach may be beyond a complex many party industry. Option A is a start which would help any party involved in improving triangulating the data and highlighting data issues. This is perceived as a lower impact change – MSM are assuming that their 3rd party data supplier would be a party that would be able to benefit from this and therefore indirectly pass the benefits to MSM and their customers via improved data quality. If there is industry appetite, Option B has the potential to deliver the most benefits however is there an appetite? Industry wide adoption may need to be mandated to get full coverage.
UK Power Networks	We have stated our preferred view to question 6.1 in the answer provided.
ScottishPower	ScottishPower consider improvement in this area as the right way forward, and is open to all options, subject to cost-benefit analysis and feasibility being explored. Merging gas and electricity supply points does provide a benefit to the industry, but requires further analysis on how best to implement the most appropriate method.

	The UPRN on its own would not provide the solution benefit. The triangulation between UPRN, MPAN and MPRN must be correct in order for the benefits to be realised.
Scotland and Southern Gas Networks	6.2 is our preferred solution as we believe that there is a part for all industry parties to play in ensuring that address data is correct and valid. SGN believes that suppliers have a part to play in ensuring that address data is correct as they will no doubt be the first point of contact for an end user if an address amendment is needed. This process in our view would be suited to being implemented through the Central Registration Service as it would provide the most efficient means of updating address data across both gas and electricity.
British Gas	The preferred solution is to resolve the existing address data quality with a focus on current systems and capabilities (e.g. ECOES and SCOGES); exploiting the benefits of Smart. Only after these options are resolved should more complex solutions be reviewed (e.g. Options A or B). The first principle for quality is to focus on the inputs and get the initial set up data correctly. A significant uplift at little or no cost should be achievable. Option A including MOPS is preferable; however, concerns remain regarding the costs of licenses and the potential barriers to new market participants. Mandating a "select address from list" option for customers would mitigate a number of described issues

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.

Respondent	Response
National Grid Distribution	We have no views regarding this.
SmartestEnergy	Obviously a single address would be preferable but there should not be any problem linking addresses with the meter IDs.
Northern Powergrid	The method in which address data should be managed within the proposed Centralised Registration Service (CRS) will depend on the logistics of the service. Options A and C both have benefits in that suppliers could reduce their activities in terms of the change of supplier process however further analysis would be required to understand the scenarios associated with address updates and how these would be applied in the CRS. For example, for option c) if a distribution business updates an address but the UPRN remains the same will the update be reflected on the gas record etc.?
Power Data Associates Ltd	Use of a common gas/electricity postal address format would be a reasonable starting point.
ESP Utilities Group	In order to achieve the implementation Central Registration Systems as soon as possible, the only feasible option is b) unlinked gas and electricity addresses. The anticipated time it would take to cleanse and link addresses would pose a serious risk to a timely delivery of CRS.
ESP Electricity Limited	In order to achieve the implementation of Central Registration Systems as soon as possible, the only feasible option is b) unlinked gas and electricity addresses. The anticipated time it would take to cleanse and link addresses would pose a serious risk to a timely delivery of CRS. It should also be noted that it is possible to have a UPRN associated with more than one MPAN recorded in MPAS. An example of multiple MPANs associated with one UPRN would be a farm that has one MPAN for import consumption, another MPAN for the exporting of electricity on to the network. The customer could also have additional 'Pseudo MPANs' or 'Related MPANs' e.g. even though there is one physical meter, Supplier A could be registered as the Import supplier and Supplier B be registered as the Export supplier. Another example of a UPRN covering multiple MPANs would be for Unmetered Suppliers (UMS) e.g. streetlights at a specific address would have one MPAN for the 'dusk till dawn' regime, and another MPAN for the controller equipment that works on a 'continuous' switch regime. Each switch regime is mandated to have a unique MPAN.

Scottish Power Energy Networks	Scottish Power Energy Networks believe that the address data can best be managed by utilisation of Option C – Separate Gas and Electricity addresses linked by a UPRN. This would allow the Industry to progress and potentially develop a tracking/ reporting regime on alignment. This would also allow investigation of any instances where valid address differences were in place (not sure in which situation this would arise, but allows for investigation). This would allow for a fairly easy future transition to single address should Data Quality be in a state that would support this in the future. We do not believe that options 'A' or 'B' provide any benefit to the industry, if anything we believe that they are detrimental to the progression of the Data Cleansing work in the Industry as they both allow for future misalignments to progress unchecked.
GB Group plc	**Provision of an Address Management and Lookup Service** The management of any large address dataset is a complex task. The utilities data set proposed for inclusion within the CRS will contain over 30 million records necessitating administration by address management specialists. In addition to the considerable, initial task of collecting, cleansing and merging legacy gas and electricity data from a number of disparate sources including all GTs, iGTs, DNOs, iDNOs, AddressBase Premium, PAF and suppliers' data, and the of appending of UPRNs, the database will require constant maintenance to ensure that all subsequent modifications to addresses and meter details are updated on a daily basis. The data will need to be made available to all eligible parties through standard interfaces, ideally through an online web service and via browser-based applications. In this way it would exist as an alternative to the existing ECOES and SCOGES services and provide pre-matched gas and electricity address-data together with UPRNs. **Design, Delivery and Operation of the Database** The address database has the potential to provide more than just the correct current address of a property but could provide a date-stamped, historic audit of all the changes over the life of the property, together with aliases (alternative and customer-preferred details) much in the same way as AddressBase Premium. The ECOES and SCOGES data sources currently contain versions of addresses which cannot be found on AddressBase (Scottish tenements provide many such examples) and this valuable information can be stored alongside the 'official' versions. For example, if ECOES currently holds an address of "Down Left, 30 Welltrees Street" and this is matched through the MPAN to a supplier address of "Flat A, 30 Welltrees Street" and subsequently to AddressBase to provide a UPRN, then both versions of the address can be stored in the CRS against the same UPRN. An end-user of the service would then be able to select either version of the address if both are presented with the guarantee that because they are linked in the database, the same UPRN will be returned for either. The same logic should be applied for different gas and electricity versions of the same property and for this reason, all versions of the address should be held and linked via the UPRN where a match can be found on AddressBase. Where no such match can be made, then the gas and electricity addresses can still be linked within the database where a confident match can be made using another address reference such as the D&B business file. **Validation by Property Visit**

	The database could also benefit potentially benefit from address corrections provided by meter readers and installers: The smart-meter rollout programme will involve a visit to every property with a gas and electricity supply and there is no better way to validate an address than to visit the property. The chance to validate address data and even confirm grid references in this way should not be overlooked as it is unlikely for there to be a repeat of such an opportunity for the foreseeable future. **Inclusion of Further Data Sources** The CRS address database provider would be able to match and link the industry address data to a number of other independent sources such as business universes (D&B, pH or Market Location for example), electoral roll addresses, consented mobile and landline telephone phone data, email addresses etc. These extra data are invaluable for the validation of consumer details at the point of capture and will help accelerate the registration services, making next-day switching a real possibility. **Use of the Service** Market participants including network operators, transporters, suppliers, their agents and switching-site companies alike would be able to subscribe to any of the licenced services offered by the provider. All transactional usage would be logged for auditing and accounting purposes.
UCL Energy Institute	We are not qualified to comment here since we do not know about the Centralised Registration Service. However, our approach is to hold meter data in one table and link it via a UPRN, so our experience has been to use c) in the above example.
Switch Gas and Electric Limited	I believe option C would be best.
First Utility	We would want the best option to provide reassurance to our gas and electricity customers. We believe the CRS should have one uniform address for both gas and electricity points. We believe that the switching process needs to be streamlined to support future aspirations and proposals in relation to next day switching.
Western Power Distribution	Preferred option is c) with addresses linked by UPRN as this will provide the benefits of linked address without requiring major efforts to align the two address formats.
Flow Energy	Although a single address would appear to simplify matters, it may cause further issues where there is a major difference between the siting of the gas and electricity meters and attempts to unify them may result in the loss of critical information. Due to this it is our opinion that the best solution would be separate addresses linked by a UPRN.
Fulcrum Pipelines Limited	Address data should be managed throughout the industry via a central data registration point that was responsible for validating & managing any attempts to get the address changed. This would then be distributed to all parties, i.e. transporters, shippers & suppliers so that everyone has the same information. The best solution would be a single gas and electricity address linked by a UPRN or alternative identifier but this would take years for complete and accurate information to be captured,

	therefore the next best option would be separate gas and electricity addresses linked by a UPRN or alternative identifier. Even this option would take a significant number of years to fully data cleanse accurately.
Utilita Energy Ltd	No response
Electricity North West Limited	In favour of C.
Switching/price comparison service 1	If a single address can be considered accurate this would remove ambiguity and remove the need for cross checking. Maintenance of this single address would need to be considered if transporters and distributers report different address information. Separate unlinked addresses could present similar issues to what are currently experienced with regard to incorrect addresses being used when establishing supply. Separate addresses linked by a UPRN would allow cross checking when there is a conflict between the addresses. However this would add a layer of manual checking or contact with the customer which could hinder switches.
SSE Energy Supply Limited	SSE does not believe that there is sufficient information and evidence available to support views on these matters. We should learn from current experience and evidence to ensure that best practices are adopted for this new approach.
RWE npower	The CRS should have strict controls and process of how and when data is updated. It would be beneficial for suppliers to have read access to this data, to enable us to query customer address information so that we can verify and correct customer data on an ad hoc basis – not just when during an automated process, e.g. change of supply. Otherwise the customer's benefits are limited to those passing through the cleansing process. Therefore option C would be the most preferential giving greatest flexibility and prevent further confusion for meter-rooms where meters and properties served are distinct.
E.ON	There are a number of different ways that address information can be held in the central registration service. Option A: You could hold a premise level address as a parent record, and hold the gas and electricity supplies as child records. This is most likely the way that many industry parties' dual fuel billing systems work. This would potentially enable the DCC to hold the UPRN at the premise address (Registration Address) under their existing licence, and where UPRN is currently being provided it would facilitate the matching of MPRNs and MPANs to the Registration Address for the supply contract. Without mandating the linking of the gas and electricity supply points by some key, or ensuring that the meter point addresses held by GTs and DNOs were identical its' difficult to see how you could have confidence in any matching exercise, or how you would "bind" the parent to the child records. Option B: Separate unlinked addresses are managed by suppliers today and would offer no improvement on the current design. A central registration system should expect to cope with dual fuel registration and this would rely on the matching by the supplier and would not mitigate the risk of ETs or deal with address mismatches any better than the current design.

	Option C: The only real difference between option A and option C would be how central registration would handle the registration processes. Option C suggests that although there is a central registration service, that dual fuel would still require two registrations processes. This leads to questions on whether customers be able to have separate suppliers for each fuel – and how you would link or decouple the supply points in the central system. This would then raise further issues around whether you're intending to register single or dual fuel accounts and who has control of updates to the data. This would be a very flexible solution, but also probably the most risky.
Wales & West Utilities Ltd	Wales & West Utilities is not providing a response to this question
ElectraLink Limited	The DTN is used by all electricity suppliers to exchange DTS messages with the current registration agents. It is also used by the big six suppliers to exchange the Notification of Old Supplier Information gas flows between themselves (a change to this service is currently being progressed through SPAA to expand it to incorporate all gas suppliers). The DTN has the ability to communicate these flows in near real-time, which would make it the ideal single mechanism for communicating the transfer requests between suppliers and the CRS. If a single flow is to be issued to the CRS for a dual-fuel customer, it seems counter-intuitive to maintain two address formats within that single flow. Including the UPRN with the single address would then allow for easier validation of the address against a relevant address dataset.
Money Saving Expert	No response
switching/price comparison service 2	No response
GTC	We believe that, in an ideal world, the best way manage address data would be to hold a single address in the CRS in order to realise faster and more reliable switching. However, we also recognise that there are drawbacks to this approach. One area of concern we have regarding this approach would be how the new connections process would work to create a single address. It is likely that this would require the electricity distributor to populate the relevant address fields and allow for the gas transporter to "attach" the MPRN to this data. Allowing both parties to create the address entry could lead to duplicate data existing in the CRS. There may be some disparity in the address records that are held by gas and electricity parties and this is something that needs to be considered in implementing the CRS. We do not believe that the approach of holding separate and unlinked addresses for the gas and electricity within the CRS provides benefits that would help Ofgem realise the aim of faster and more reliable switching. There may be some limited situations where it is necessary for there to be separate addresses for the gas and electricity but in these situations it is likely that the address information will be materially different. If this option is implemented then robust and complete industry processes will need to be in place to ensure that single fuel suppliers only switch the requested fuel.

	If option a) is not realistic and faces issues to implement then we believe that holding separate but linked gas and electricity addresses is the second best option. We understand that the UPRN is likely to be the most appropriate mechanism by which to link the two addresses for established properties but we do have concerns that it is not robust enough at the early stages of developments, in the new connections process, to enable an accurate and reliable link between two addresses. It may be more appropriate to link the MPRN and MPAN by address itself without the need for a further key. Although this is not a unique and consistent key we believe that, with input from industry parties, it will prove sufficient to be able to link MPRNs to MPANs. Once two addresses have been linked in this way then they can remain linked. We note the work that DECC has undertaken in the linking of MPRNs to MPANs and believe that this could form the basis of an efficient way to link two addresses
EDF Energy	Option C does seem to be most appropriate. However, we would note that issues we raised in response to question 6.2 need to be addressed to deal with anomalies that exist within electricity in respect to sites with multiple MPANs that are not related but might share a UPRN and to MPANs that are related but that could have different UPRNs.
Northern Gas Networks	Issues related to the options provided need to take full consideration of GDN and DNO requirements as noted above.
Xoserve Limited	In its capacity as the Gas Transporter Agency, Xoserve does not have access to any evidence which would enable us to give a view on the relative merits of each of the options for holding address data across gas and electricity. Ofgem's Switching Programme has yet to start work on defining the scope and nature of a Centralised Registration Service. Whether or not the data is held in a discrete central service, existing registers would have to be modified to recognise, accommodate and utilise any new unique property reference.
Money supermarket	All parties in the industry should be able to access the data and return data in various industry standard formats for example JSON. It would need to cope with large volumes of look-ups from high volume parties like PCWs. Availability would need to be 24/7 with necessary SLAs in place. The CRS should replace a number of existing services e.g. Ecoes DB. There should be well defined processes for adding to and amending data, including who can do this. Data changes should be available in a timely manner to all users. Data quality routines / audits and data completeness checks necessary. Change history would be required. Data requirements from all parties need to be delivered. Currently no view on methods of holding the data. As and when appropriate, this can be covered as part of requirements gathering from the PCWs.
UK Power Networks	N/A
ScottishPower	ScottishPower believe that we need to consider what customers want; some customers,

	especially SME and I&C customers would require separate billing addresses. The industry Faster Switching Program did not consider the customer needs; prepayment customer needs were not taken into consideration, which contributed to increase in the volume of Mis-directed payments (MDP's). This was due to the devices being issued closer to supply start dates. The move to next day switching will have a greater impact on Prepayment customers and this will need to be given more consideration. Ultimately, all of the options will be reliant on the quality of the data being input. Further detail would be required in order for ScottishPower to comment. A single address record for each premise under which the relevant MPAN, MPRN and device details can be attached is the ideal solution and the one that best facilities a centralised registration service (and potentially a future centralised settlement service) for Electricity and Gas. Costs need to be considered for all options. ScottishPower believe cost-benefit analysis is required across the industry to allow for greater informed decisions to be made.
Scotland and Southern Gas Networks	Including the use of the UPRN in the scope of the systems that will be developed for the Central Registration Service would provide a good opportunity to link addresses together that are used by both the gas and electricity industries. The use of the UPRN by the Central Registration Service would prevent the duplication of costs that would be endured by developing separate solutions for both gas and electricity therefore the implementation of an obligation to use UPRN's ahead of the forming of the Central Registration Service wouldn't be cost effective.
British Gas	The centralised registration service should hold a single address ID with an attached UPRN, this would allow for companies to easily recognise an address and make it easier to identify a duel fuel customer. Having separate addresses for gas and electricity will allow for the same address data related problems customers face today and the faster switching will not be achieved. CRS will provide the long awaited opportunity for dual fuel switching to take place across the same timelines and for customers to receive both services at the same time. The addition of a UPRN will allow for both meter points to be switched together seamlessly and may give customers the option to only allow the switch to proceed if both fuels go live on the same day. Using address data will improve upon current processes but will still be ineffective where there are multiple meter points at a single address. Therefore UPRN is the ideal solution for the CRS. If this can be agreed in the near future then it can be included as part of the design of the CRS, thereby resulting in a more efficient change of supplier process with an improved customer experience.

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?

Respondent	Response
National Grid Distribution	We have no views regarding this.
SmartestEnergy	The SAF is a vastly superior format as it allows for an identifier in the first row for an unmanned site and has fewer field options i.e. less room for error in choosing the correct sub-category (on the basis that some of the fields in all addresses will be blank.)
Northern Powergrid	A common address would allow the CRS to hold a single address or hold addresses linked by the UPRN although timescales to update the address data in parties systems will need to be considered as it could cause alignment issues and create further issues in the change of supplier processes. We believe that PAF should be the common address format as this is the format used country wide rather than SAF which is specifically electricity only.
Power Data Associates Ltd	No view
ESP Utilities Group	A common address format would be preferable however thorough assessment should be given as to whether the adoption of either format will place restrictions on one/both industries. The flows built as part of Project Nexus have been built to match PAF, matching to a new address format would require a lengthy change period in addition to the work required to map the data to the respective fields. Any change to transform gas data to match a SAF format would add more costs to business and potentially delay the delivery of CRS. A key difference between PAF and SAF is that PAF separates the Building Name and Number. To conclude all previous points, we would support the view that PAF is implemented as the universal address format.
ESP Electricity Limited	As an electricity distributor all our addresses are in the SAF format as agreed and regulated by the industry (MRA MAP09), therefore as an electricity distributor, ESPE's preference would be for SAF to be the common format as this would negate the need for every MPAN's address to be amended to PAF format. The character set used for PAF introduces some characters that are not capable of being transmitted over the Data Transmission Network (DTN). To allow PAF to be mandated as the agreed format and for the format to be transmittable across the DTN, this will require many industry changes to systems and regulatory agreements e.g. MPAS, the Data Transfer Catalogue (DFlows and J Items specifically), the Master Registration Agreement, internal bespoke systems etc. This would be at a substantial cost to all Parties involved.

	Additionally there are major difficulties and risks associated with addresses of flatted premises, particularly in Scotland. The format for flat address are often different from the gas and electricity perspective. A significance percentage of PAF addresses for flatted premises contain no flat address detail, and the detail held for others is inconsistent with the identification commonly used in the electricity industry. PAF flat details are often in the form of Flat 1, or Flat 1b. In many cases, particularly in Scotland, the addresses for electricity distribution businesses are in the form 1F1, 1F2 or 1L, 2R etc. Work would be required to align the gas and electricity approach to flat address formats to ensure consistency across both SAF and PAF. Whichever common address format is agreed on there will be significant costs to amend either the electricity address to PAF or the gas address format to SAF. We therefore believe that the formats currently used by gas (PAF) and electricity (SAF) remain as they are for each utility to ensure a timely delivery of CRS.
Scottish Power Energy Networks	Our strong preference would be for the OS Address Base Premium format. We believe that there are a number of Industry Parties that have already purchased this dataset from OS and are currently utilising the data Utilising this is a step towards ensuring that address formats can be aligned across parties and utilities, The benefit to the Industry we believe comes from all parties consistently utilising the same format Inevitably there would be significant costs associated to a change in address formats, but we have no knowledge of any work undertaken to quantify this.
GB Group plc	To some extent, the format of the data is inconsequential as long as all address elements are stored in an 'atomic', form (separate building, street and locality details). Both the SAF and PAF format provide a good level of granularity although the PAF format includes discrete building name, building number and organisation fields. This extra distinction can useful for some matching scenarios, particularly for business-name matching where the name may be in the building name or the organisation field. The SAF format includes a 'free text' field in Metering Point Address Line 1, and this has proven to be useful to contain additional information such as directions or delivery details for example "Landlord's supply", "Fourth floor" or "Meter box accessed from rear gate in Albany Place". AddressBase and the local authorities' LLPGs hold address data in the BS7666 gazetteer format and whilst this provides even finer granularity than PAF or SAF, including start and end numbers and suffixes for building ranges (34-36) as well as primary and secondary addressable objects, this is believed to be unnecessarily detailed for the requirements of the industry. A number of other address-related fields should however also be considered for inclusion as discussed in previous sections above, such as date-stamps (start, change and end dates), source flags (to identify which from sources an address was derived) and keys to link addresses to other reference databases such as UPRN, DUNS number, UDPRN, UMRRN etc. To summarise, it is believed that the regular PAF address format supplemented with one or possibly two free-text fields, should be employed as the standard for the industry. Additional, non-address fields should also be included to hold metadata, address-related information such as source flags and date-stamps.
UCL Energy Institute	Again we are probably not qualified to comment here, but PAF seems the more detailed and structured format and in our experience the looser the format, the harder it is to match it to other data sets.

Switch Gas and Electric Limited	PAF for reasons outlined above
First Utility	In our view, there can be no question that there should be a common address format. Different organisations within the industry using various address formats are the primary reason we have such data inaccuracies.
Western Power Distribution	A common address format across GAS and Electricity would provide the ability to match addresses and also identify discrepancies where the same address is allocated different UPRNs. SAF would be the preferred format as this is used by DNO's across the full population of addresses, Gas being an incomplete sub-set of this.
Flow Energy	To provide ongoing good quality data it is important that a common address format is supported. We believe that PAF would be the most beneficial as it is already the most pervasive format, matched customer's expectations and is a recognised international standard.
Fulcrum Pipelines Limited	PAF would be the best format as it is recognisable with the Royal Mail Postal Address system.
Utilita Energy Ltd	We see the benefit of introducing consistent data in a PAF format is that it should therefore mean less mismatches based on format differences. The largest risk would be the rigidity that this new process could introduce to the industry. If a supplier needs to update the address data based on a customer request (e.g customer names their property) what would be the time frames for the PAF data to be updated? Would we need to wait until Royal Mail was able to update the data in their system? We would also need to understand the process if they failed to update it in time. Overall the process needs to be flexible and allow for change in data.
Electricity North West Limited	Would support a common address format and PAF would be our preference human error could however still be an issue.
Switching/price comparison service 1	In support of new innovations and information transfer between various stakeholders in the energy market a common address format is essential. Consumers are more familiar with PAF and PAF is more widely used by comparison websites (I can't comment on suppliers). However SAF lends itself more to the energy market. Adoption of SAF would require changes to price comparison websites and extensive testing, and possibly a change in costs. Would there be the possibility of working with Royal mail to enrich PAF information to include meter numbers, or meter status?
SSE Energy Supply Limited	Due to the early stages of the CRS, SSE is unable to answer this question as we feel it is too early to discuss the management of addresses. We have no favourable option or format which we would like to adopt at this stage.
RWE npower	Consistency in address data and format should be held across both fuels and address stored

	should be malleable. However, we do not have a definite view on this at this stage.
E.ON	A common address format would help options B & C in 7.1, but for any solution the formats should comply with PAF as this is often used in complementary address systems used elsewhere in the industry.
Wales & West Utilities Ltd	Wales & West Utilities is not providing a response to this question
ElectraLink Limited	ElectraLink does not have a view over which of the possible address formats is preferable. We believe that introducing a single address format can only be of benefit to the industry in helping ensuring processes operate as smoothly as possible, reducing the risks of mismatches and inconsistency.
Money Saving Expert	No response
switching/price comparison service 2	SAF is closer to the address format a customer would recognise. As such, it will usually be easier to transform a manually entered address into the SAF than into the PAF. Indeed, in certain circumstances a transformation into PAF may not be possible, as additional address data would have to be captured. A concrete example might be a customer who lives at an address as follows: Flat 2 Aysgarth House 3-5 Canfield Gardens London NW6 3JR When manually entering this address, they may choose any of the following, which would almost certainly serve as a postal address: Flat 2 3-5 Canfield Gardens London NW6 3JR Or Flat 2 Aysgarth House London NW6 3JR Or even perhaps 2, 3-5 Canfield Gardens Aysgarth House London NW6 3JR

	In which case it is extremely difficult to determine a building number, sub building number and building name. Similar issues would exist with, for example: Flat 1.4, Ziggurat Building, 60-66 Saffron Hill, London, EC1N 8QX, United Kingdom Flat 18, Da Vinci House, 44 Saffron Hill, London, EC1N 8FH, United Kingdom Whilst in the ideal case it is certainly possible to transform these addresses into PAF, when they have been manually entered by a customer it is often almost impossible.
GTC	We believe that there if one address is held then it is imperative that a common address format is employed. The format that would be most beneficial will depend largely on the way that the addresses are linked and then merged into one address. It will also depend on how the new connections process will work going forward to create new address records. If the electricity distributor is considered responsible for the registration (as would make sense given the likelihood there will almost always be an electricity supply but not always a gas supply) then it would naturally follow that the current address format used in electricity registration systems would provide the basis for the simplest transition to a single address. If the approach taken is to adopt separate but linked addresses then it does not seem relevant to hold the addresses in a common format. One of the benefits of having separate but linked addresses is that it will be a smoother transition from the existing systems than merging the address data. This benefit is somewhat lost by the requirement to alter the format of an entire set of industry data.
EDF Energy	A common address format is something we support. We feel that electricity SAF format is appropriate as this does provide an ability to better locate an MPAN where, for example, MPAN relates to a non-postal address. It could though become apparent in any work to progress towards this goal that even that format is not complete. At this time we do not feel that we should be tied to an existing approach but to rather determine appropriate format as part of work on a centralised registration service.
Northern Gas Networks	NGN cannot consider this at this stage without significant impact assessment on processes and systems
Xoserve Limited	Xoserve is not providing a response to this question.
Money supermarket	For consistency a standard format should be used. Currently, PAF is the format used by MSM with the addition of a number of extra bespoke fields. This is adopted throughout the MSM group to achieve a consistent customer experience. PAF is used throughout the Energy, Insurance and Money industries. PAF could be used as a base standard with additional fields added where necessary.
UK Power Networks	SAF appears to be the most common address format currently used by industry parties; therefore it would seem beneficial, with minimal impact and cost to parties, to adopt the SAF format.
ScottishPower	PAF is the GB standard, so this should be the option that requires the least change to accommodate. Based on the preferred option, a common address format may be more

	beneficial than with other options. However analysis is required to establish this and, until that analysis has been completed across the industry, ScottishPower would be unable to comment.
Scotland and Southern Gas Networks	SGN believe that the use of PAF as a common address format would be beneficial as this is the format currently used by the Post Office which in our view should be the standard.
British Gas	A common address format would give the industry common definitions for address data and make it easier to attach a UPRN, especially when consumers have fuel across different suppliers. PAF address format would be the most beneficial as it is regularly maintained and has a master of record.

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?

Respondent	Response
National Grid Distribution	We have no views regarding this.
SmartestEnergy	There would provide no additional benefit for SmartestEnergy. Surely you can have one message with MPAN and MPRN in it? What has it got to do with the address?
Northern Powergrid	We believe a common UPRN/address format for gas and electricity supplies is the only way that a supplier could request a transfer for gas and electricity via a single transfer request, unless, that is, an alternative single reference number is considered.
Power Data Associates Ltd	Whilst this appears a sensible approach it will be totally flawed where the relationship between MPAN/MPRN and UPRN are not 100% accurate. It could well lead to further problems with unexpected changes of supplier being initiated due to relationship errors or omissions. Proceed with caution.
ESP Utilities Group	The immediate nature of next day CoS provide no margin for error resolution. If there is an incorrectly paired address to UPRN across gas and electricity the subsequent uncoupling and recoupling would introduce additional delay either pre or post transfer and increase the risk of ETs occurring.
ESP Electricity Limited	The immediate nature of next day CoS provide no margin for error resolution. If there is an incorrectly paired address to UPRN across gas and electricity the subsequent uncoupling and recoupling would introduce additional delay either pre or post transfer and increase the risk of ETs occurring.
Scottish Power Energy Networks	At a high level we would expect that a UPRN would support this, however we would expect that the key driver would remain the MPAN/MPRN.
GB Group plc	Alongside the MPAN/MPRN, the UPRN will be able to confirm that the property details are correct, particularly in cases where the address data in the gaining and losing suppliers' databases differs. Whilst the UPRN should not be used alone as the principle key but should be used as a verification item which will help to confirm that the gas and electricity records refer to the same premises. A common address format for gas and electricity records provides a further method for validation, particularly if it has not been possible to append a UPRN to one or both addresses. A well-structured address broken into discrete or 'atomic' elements can be easily machine-

	parsed and matched. The greater the number of items that can be passed through with the request and automatically validated, the greater the confidence of an error-free switching process. In this respect, the UPRN as well as addresses in a standardised address format will help to provide support for the objective for reliable, next-day switching.
UCL Energy Institute	This is something of which we have no experience.
Switch Gas and Electric Limited	It would enable 100% MPAN/MPR matching which is necessary to support next-day switching for all customers
First Utility	The common address format and UPRN introduction would help to resolve common address inaccuracies however our main concern would be the implementation of governance regarding amendments to address data.
Western Power Distribution	No comment
Flow Energy	The use of the UPRN and a common address format will greatly improve the ability of the CRS to perform its aim. Without them the resources required to perform the desired function are likely to greatly increase and efficiency reduced.
Fulcrum Pipelines Limited	A UPRN would only support this if it was provided by the requester whether this is the end user or a switching site but the main blocker is that the general public has no idea what a UPRN is and would require some way that the switching process offered the public a simple guide as to how they could obtain their existing UPRN.
Utilita Energy Ltd	This doesn't seem to take into account if there are different suppliers for each supply point. In this case we would assume the supplier would still be required to enter a supply point data and therefore negate the advantage of being able to enter in a UPRN.
Electricity North West Limited	UPRN would ensure that all data flows are updated with ease so updates should be a simpler process to manage
Switching/price comparison service 1	This seems like a logical approach if both gas and electricity meter and address information is accessible using one UPRN. If the address selected by a user on a PCW or supplier website relates to a UPRN and gas and electricity meter information in the one place, information can be sent in real time at the point of submission of the information and the switch process taken from there.
SSE Energy Supply Limited	We do not believe that the UPRN product will improve the customer experience during the change of supply process. The key to successful transfers is identifying the correct address to switch. It is not clear how a single transfer request will improve the likelihood of this happening and may remove one of the data items in the triangulation process.

RWE npower	Our different business segments have different opinions on this: **Domestic:** A UPRN and common address format would support this aim and would be beneficial to the customer, (not having to enter MPAN / MPRN). To what extent, we are not sure i.e. what other potential issues or challenges there are with next day switching, which we are not aware of currently. **Npower Business:** Minimally. An operator would need to provide MPAN and MPR as well otherwise much higher risk of ETs **Npower Business Solutions** See earlier comments. The UPRN is not the 'silver bullet' to simply improve address information. If the address data is aligned to the same format across both fuels, then registration of suppliers across both fuels would be possible with little error, eradicating the need for a UPRN.
E.ON	It depends on what is needed to trigger the registration request. If you can rely on the address for both gas and electricity at the same premise matching exactly, then the customer's address should be sufficient to capture both supply points and trigger a single registration request. However, the Customer Transfer Programme from 2003 recommended that multiple data items be "triangulated" at point of sale to ensure that the correct supply point was being targeted in order to reduce erroneous transfers. If supplier's validation checks are robust and can ensure that the supply points which are contracted for under the dual registration are those correctly targeted in the registration request, then a single address/common format could achieve this. The degree to which even in a dual fuel future, a customer maintains their options to have different suppliers for gas and electricity will ultimately drive what records are needed.
Wales & West Utilities Ltd	Wales & West Utilities is not providing a response to this question
ElectraLink Limited	No comment.
Money Saving Expert	No response
switching/price comparison service 2	No response
GTC	There are limitations in the use of the UPRN within the switching process itself. It may allow for more reliable and accurate transfers if the switching customer is aware of their UPRN and provides this to a supplier or switching agent. However, we consider that within the switching scenario it is far more likely that the customer will know their MPRN, MPAN or both. There may be residual effects that can be derived from having the UPRN as a persistent key to

	link address date but, as we have discussed earlier in this consultation response, we believe the use of the UPRN is also limited in this respect. A single address, or perhaps separate but linked addresses, would be sufficient for a gaining supplier to be able to send address information, an MPAN, an MPRN or any combination of those pieces of information to the CRS in order to be able to take control of both the gas and electricity supply.
EDF Energy	Given issues we have highlighted in section 6.3 we are unsure if sending a single request using an address or UPRN is appropriate. The Target Operating Model is intended to switch supplies on a metering point level with the single request containing the details of all of the metering points (for both fuels) that the Supplier is proposing to switch. The value of the UPRN (or a common address format) is in helping to make sure that the Supplier has initially selected the right metering points to switch and in receiving accurate address information for any metering point that switches to the Supplier, rather than in the switching process itself.
Northern Gas Networks	The lack of clear one-to-one relationship rules between UPRN and MPRN need to be investigated and understood more fully to consider this in more detail and ensure that any future process takes full account of these complexities.
Xoserve Limited	Assuming that the CRS will either leverage existing registers as a mechanism to discharge its services and / or be required to provide outputs to existing stakeholder registers, it would appear likely that a carefully implemented unique property reference should reduce the risk of inconsistent address records across databases used by different organisations for different purposes.
Money supermarket	A common address format makes any comparison much easier. This is important for old and new suppliers as well as parties in the middle of the cycle e.g. a PCW. Consistency will increase efficiency, effectiveness and accuracy of any switch. The UPRN will aid with any address queries i.e. is 'plot 1' the same as 'New House Name'. It provides more opportunity to ensure correct addresses are identified and switching has a greater chance of being successful for the customer.
UK Power Networks	Without the wider use and population of the UPRN it is difficult to understand how this aim would be achieved. The UPRN is the only independent identifier that can act as a link between gas and electricity supply points.
ScottishPower	ScottishPower believe that the customer requirements and needs would have to be considered with any change. Referring again to the industry Faster Switching initiative, where prepayment customers were not considered within the project. Next-day switching would introduce additional challenges, such as the issuing of a key/card for the prepayment meter in time for the supply EFD. Regarding the CRS, we would require to understand how the CRS system would work before commenting on how a UPRN or common address format could support this process. If the supplier is required to list each of the MPANs/MPRNs at the property that they wish to register, then the UPRN does not assist the registration process. If the UPRN is the input, rather than the MPAN/MPRN then the CRS could ensure that all supply points at that property (for both imported and exported energy if relevant) are transferred as part of a single transaction. We need to consider that if 1 approach was taken for both single and dual fuel transfers, what

	will be done to mitigate against the risk that both fuels are taken instead of just 1, which could lead to an increase in ETs. Previous initiatives, namely MTC (meter time-switch code), were designed to reduce ETs but did not achieve this. We require details on how the UPRN would be executed to give assurance that this risk is removed.
Scotland and Southern Gas Networks	The use of a common address format would no doubt help in this process as it would prevent conflicts of information that may arise from using several address formats. If the use of a UPRN enables address information in different formats to be linked then the use of a UPRN may be required.
British Gas	Having a UPRN would allow Energy companies to easily identify customers who genuinely had a wish to switch. It would also allow us to identify duel fuel customers more readily and make sure that switching happens for both fuels at the same time. Not having a UPRN would mean that we could potentially have two transfer requests for the same consumer. Having a common address format would also mean we have industry wide common definitions and allow for the easy management of address data sets.

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.

Respondent	Response
National Grid Distribution	We have no views regarding this.
SmartestEnergy	MPANs and MPRNs could be linked within CRS but this does not need to be done with a UPRN. They could simply be linked. A single transfer request could contain both the MPAN and MPRN and if they do not match within CRS the transfer request would have to be rejected. Such an arrangement would allow those who are not in the dual fuel market to carry on as normal.
Northern Powergrid	Applying the UPRN as part of the new connection would allow the distribution business to maintain the address throughout the life cycle of the record and would mitigate the risk of issues with plot to postal address updates. However, there are no mandates on the use of the UPRN in terms of house builders, property developers or local authorities therefore the UPRN could not be applied on every occasion. Also, the distribution businesses would need to change their new connection systems and processes and would need to promote these changes to their customers.
Power Data Associates Ltd	As identified in my response to Q4.1 this is not just an issue about new connections, but through the whole life cycle of the property. As the premises changes over time there will need to be a party, or parties, responsible for updating the relationships between UPRN and MPANs and MPRNs. Some triggers may come for engineering related activities such as providing a new supply, or removing a supply, which should always be known to a GT/Distributor, but others may occur because the local authority believes a single property has now be split into multiple properties. The UPRN lifecycle identifies at least two different models adopted by planning authorities as to when to allocate UPRNs to physical properties. These different approaches each have advantages and disadvantages. However the two approaches will result in UPRNs being available at different stages of the new connection process. So it is not clear how that will interact with the new supplies quotation and works process which commences when the development is still a plan. If in all cases a UPRN is created by the time the gas or electricity serive is fitted to a new (or changed) premises, then the GT/Distributor can relate that to the MPRN/MPAN at that time – and show it on the label at the ECV/cut-out. I think the timelines need further review to confirm whether this will always be possible.
ESP Utilities Group	If the UPRN provided an accurate link between MPRN and MPAN it could be useful as a single reference to facilitate dual fuel CoS. However, this would not be of benefit where there is only an electricity supply or where the customer does not have the same energy supplier for gas and electricity.

	Considerable work would need to be carried out across all industry parties to match the existing electricity and gas address data to provide a reliable single reference. Currently, with only a single reference for each energy type, there are a large number of erroneous transfers; it is not clear how the introduction of another reference will improve this situation.
ESP Electricity Limited	If the UPRN provided an accurate link between MPRN and MPAN it could be useful as a single reference to facilitate dual fuel CoS. However, this would not be of benefit where there is only an electricity supply or where the customer does not have the same energy supplier for gas and electricity. Considerable work would need to be carried out across all industry parties to match the existing electricity and gas address data to provide a reliable single reference. Currently, with only a single reference for each energy type, there are a large number of erroneous transfers; it is not clear how the introduction of another reference will improve this situation.
Scottish Power Energy Networks	We believe that one of the key benefits of the UPRN is in the New Connection process. We see this as an important development going forward, and believe that the availability of the UPRN at this point is crucial to the credibility of Data Quality going forward. The utilisation of the UPRN in the process for requesting MPANs provided surety in the geographic location of the service prior to the MPAN/MPRN being created, we believe that this is the key to all the processes following. We believe that there will be a reduction in the number of requests for MPAN creations (other than for additional services e.g. heating) on an ongoing basis and that over time this will be instrumental in improving Address Data Quality.
GB Group plc	The attachment of UPRN to network operators' gas and electricity addresses will realise many benefits as outlined throughout this response. These can be summarised as follows: • The attachment of the UPRNs will necessitate a major data cleansing project which will improve the quality of source addresses within transporters' and distributors' databases; • Linking MPANs and MPRNs for a property; • Highlighting inconsistencies and ambiguities with existing data. For example, 'Troves Farmhouse' a property for which a DNO has two MPANs (single UPRN) may be represented on a suppliers' database as two separate properties, 'Troves Farmhouse' and 'Troves Farm' (two UPRNs). Without the UPRN, it would be hard to know whether the supplier or the DNO held the correct information but the UPRN confirms that these are indeed two separate properties; • Providing the ability to easily share data across the industry by linking to and validating property details on other datasets that are populated with UPRNs, particularly supplier databases; • Providing the ability to easily link to external datasets that are populated with UPRNs such as consented email and telephone number data, electoral roll, business databases; • Linking with retailers' addresses to act as a further confirmation of supply addresses when address data may be different. Currently this can only be achieved by direct address comparison requiring specialist address management software. • Providing the ability to enhance consumer data with extra information from AddressBase such as geocoordinates. This for example would be useful for site

	engineers when used in conjunction with a GPS, to confirm the location of hard-to-find properties.
UCL Energy Institute	We are not qualified to comment here.
Switch Gas and Electric Limited	As 7.3
First Utility	We do not foresee any significant differences in adding UPRN to new connections as opposed to existing supply points. There may be issues in maintaining changes to addresses due to the plot to postal issues currently within the industry. UPRN's whereby a gas and electricity supply point cross multiple suppliers would require suitable governance for managing amendments.
Western Power Distribution	UPRNs allocated to plot numbers do not change when the postal address is allocated. Therefore the current problem being experienced on plot to postal address changes should be largely eliminated as the new address can be linked to the correct MPAN via the UPRN.
Flow Energy	No response
Fulcrum Pipelines Limited	Could be beneficial if Building Regulations specified that developers had to provide this item with full postal addresses prior to the issuing of MPRN's and meter installations. Additionally there needs to be a simplistic route for existing customers to be able to find out their current UPRN for their property. Finally, the costs for all parties to be able to record UPRN's on their systems must not be detrimental to individual companies. A central data registration point responsible for validating & managing any attempts to get the address changed. This would then be distributed to all parties, i.e. transporters, shippers & suppliers so that everyone has the same information.
Utilita Energy Ltd	We believe that the use of UPRN in this circumstance makes sense as in this circumstance there is almost no room for incorrect data. The data cleansing exercise on existing addresses will be the challenge. Please bear in mind that if the PAF format was used as the overall solution a new connection would not necessarily have an address assigned to it and therefore a different format would be required than PAF.
Electricity North West Limited	No response
Switching/price comparison service 1	A unique property identifier would seem to be an essential part of the new connections process. As with all databases, ensuring that the information within CRS is up to date and resolving any conflicts will ensure that the database is of value. Responsibility for this should probably sit with Ofgem.

SSE Energy Supply Limited	The true benefits of the UPRN are the fact that utilises geo-coordinates; however these are only fixed as the postal address is confirmed and this is frequently after supply has been registered and confirmed. Until the coordinates are confirmed, the addresses associated with the UPRN and the MPxN can change. Inevitably this means that the customer can be registered to the incorrect MPxN although address details were correct at the time of the registration.
RWE npower	If the update of address associated with UPRN is effectively done on a reliable cycle then there are some benefits. But need to work out carefully the process for incorrect allocation of MPAN / MPR to UPRN and how to stop reverting to previous incorrect addresses where errors are found.
E.ON	As part of the New Connections process, the use of the UPRN will enable the maturing of the address and the tracking of the address changes from "cradle to grave" of a supply point. As local authorities are issuing the UPRN at the point when it's likely the services are being laid, the developer and the network companies should be able to correctly capture the UPRN at an early stage in the premise's development, and more likely before a property is occupied. With an obligation to verify and periodically update the address, parties will be able to rely on the network companies ensuring that the maturing of the address from the plot to a full postal address is captured and recorded and shared with the industry. The inclusion of the UPRN in the CRS will also ensure that if there are time lags between the completion of the registrations of gas and electricity, that the matching of the supply points can be completed, without action by another party to "bind" them to each other in the CRS.
Wales & West Utilities Ltd	Wales & West Utilities support the provision of the UPRN upon registration of a new M Number. We would need to move to a position where the UPRN is captured as part of the PAF validation of the address and for single new supplies to existing domestic properties this is not an issue. For multiple sites, especially new build and conversions, and also Industrial and commercial sites with multiple meter points, this is an issue as the UPRN does not exist in our GIS system at the quotation / acceptance stage. Transposition from lists provided by local authorities will lead to errors in populating multiple UPRNs leading to further data errors.
ElectraLink Limited	No comment
Money Saving Expert	No response
switching/price comparison service 2	No response
GTC	The benefits of the UPRN as part of the new connections is, in our opinion, limited. We have noted earlier in this consultation that we do not believe that the allocation of UPRNs at the early stage of a property's lifecycle is robust enough to draw benefits for the creation of new registration information in the CRS. In the absence of assured accuracy of this information we believe that there are risks to including the UPRN at the early stage of a property. The inclusion of an additional numeric identifier may cause confusion and uncertainty in the new connections

	process rather than harmonising address data across industries.
EDF Energy	Any gas/electricity new connection process should be a subset of any new registration process that we develop as part of a central registration system. We can see that having a UPRN as part of this process could be beneficial but do not feel that it is something that should be mandatory given comments in paper on how processes for provision on UPRN on new connections differ.
Northern Gas Networks	As noted above, gas connections planning and installation processes require that a MPRN is allocated to a service before a UPRN is available due to the timing of allocation of a final postcode and postal address
Xoserve Limited	Xoserve is not providing a response to this question.
Money supermarket	UPRN links data from 2 different industries in one place. It can be used to audit existing data sets and highlight quality across the various data stores. It can be used to link to many other data sets that use it as a primary key.
UK Power Networks	The UPRN has a role to play in the new connection process and the transition from a plot to a permanent postal address. There will continue to be a small number of exceptions to the rule – for example, where a developer fails to obtain planning permission for a development or there is a timing delay with local government sending updates to Ordnance Survey. Furthermore, there will always be a small percentage of MPANs that do not match a UPRN. As the MPAN relates to physical assets operated by the network operator, the network operator should be responsible for allocating an MPAN to a UPRN and for any changes to this relationship.
ScottishPower	The UPRN would also assist with the triangulation of the MPRN/MPAN and the UPRN but there is a risk that the UPRN could be allocated to the wrong address, resulting in both the incorrect MPAN and MPRN being transferred, which would potentially increase ET's. The UPRN should help with the roll-out of the Smart Meter programme, however until we can see this in practice, we are unsure of what the benefits will be.
Scotland and Southern Gas Networks	The use of a UPRN in the new connections process could be used as a vehicle for linking plot addresses to postal addresses however this is very much reliant of developers and local authorities ensuring that address information is updated in a timely manner.
British Gas	This is a key requirement as many issues stem from New Connections, where gas and electricity data updates are processed separately and not harmoniously maintained.

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?

Respondent	Response
National Grid Distribution	We have no views regarding this.
SmartestEnergy	No comment
Northern Powergrid	Mandating the UPRN would allow the creation/migration of a single record for gas and electricity supplies in to the CRS and would allow suppliers to issue a single transfer request to the CRS on an on-going basis. We believe that the mandate should be made ahead of the CRS to allow single transfer requests from go-live. Also, if the mandate was made during implementation, the volume of address changes, would add a further complexity to the new CRS systems and processes.
Power Data Associates Ltd	No comment
ESP Utilities Group	If completed before the introduction of CRS, this will be beneficial. However the considerable length of time needed to allocate UPRNs to existing supply points should not be under-estimated, and should be recognised as a high risk to the timely introduction of CRS. The matching process is a significant piece of work that requires further analysis to understand costings and timescales. Additionally, parties may find resources are constrained as each constituent works to achieve other industry changes, including the upcoming implementation of Project Nexus on 01/10/2016. The process of how to reach the goal of every supply point having a matched address has not been identified. We are looking at the goal without detailing the process therefore we cannot provide comment in regards to the enduring operation.
ESP Electricity Limited	If completed before the introduction of CRS, this will be beneficial. However the considerable length of time needed to allocate UPRNs to existing meter points should not be under-estimated, and should be recognised as a high risk to the timely introduction of CRS. The matching process is a significant piece of work that requires further analysis to understand costings and timescales. Additionally, parties may find resources are constrained as each constituent works to become and remain compliant with other industry changes across all of the regulatory codes. The process of how to reach the goal of every meter point having a matched address has not

	been identified. We are looking at the goal without detailing the process therefore we cannot provide comment in regards to the enduring operation.
Scottish Power Energy Networks	Scottish Power Energy Networks believe that while both of the solution options 6.1 and 6.2 would support the establishment and enduring operation of the CRS, we do not believe that they are critical to the delivery of either. We believe that the benefit of delivery ahead of the CRS is that it would deliver a more robust system with an increased level of service for the end customer. The risks of delivery ahead of the CRS is that there is no clear view of full extent of the data discrepancies in the Industry, and there may be insufficient timescales to address all the issues ahead of the Next Day Switching Programme. We believe that should this route be the preferred option that there should be appropriate contingencies put in place.
GB Group plc	**Option A** Although under Option A, the UPRNs are not proposed to be released to industry participants it is assumed that they will be included within the upload of the transporter and distributor data to the CRS and this enable the provider of address management services for the CRS to link the gas and electricity records through the UPRN. Without this, Option A does not support the harmonisation of gas and electricity data particularly well providing benefits for only the GTs and DNOs. **Option B** The provision of the UPRN and widespread use by all industry participants would enable the confirmation and validation of address data at all stages of the registration lifecycle, helping to ensure swift, error-free switching. Ambiguities discovered at any point could be fed back by the agent, supplier or switching site, to the CRS for further investigation. Both options A and B thus support the establishment of the CRS in providing a mechanism to harmonise gas and electricity data. Option A will enable only the transporter or distributor to notify address changes through the UPRN but Option B will provide a mechanism for the whole industry to identify inconsistencies within the data so helping with the ongoing maintenance of the CRS. **Option C** This option is an extension of Option B and involves the creation of a number of codes of practice designed to improve the quality of address data at all stages of the address lifecycle through the introduction of a number of processes. It is believed that this will have a significant impact on the quality of address data and as such will help in the longer term to improve the harmonisation of gas and electricity addresses in the CRS. The programme to cleanse network operators' data to AddressBase can commence at any time as long as the operators have the facility to store UPRNs within their databases. Thus the introduction of Options A and B ahead of the creation of CRS will have no foreseeable negative impacts but will conversely help the rapid establishment and roll-out of the CRS services to the industry. However, the creation of the CRS should not though be delayed by the failure of any transporter or distributor to append UPRNs to their data as this is an address-management function that the CRS operator should be able to undertake anyway.
UCL Energy Institute	We are not qualified to comment here.

Switch Gas and Electric Limited	It would reduce risk to implement ahead of CRS to iron out any bugs prior to the Next Day Switching Programme going live.
First Utility	We believe that implementing the necessary short term solutions (please see our suggestions in previous responses to questions) prior to establishing long term aspirations will provide a better platform for introducing CRS. The industry needs to improve address data quality before implementation to CRS or DCC in future.
Western Power Distribution	No comment
Flow Energy	It is our belief that it is essential that the CRS makes full use of the UPRN and a single address format (PAF) to ensure it is and remains to be fit for purpose. To make sure the CRS is effective and robust from the beginning it is imperative that the option(s) described in Section 6 are implemented and the cleansing work complete first. This will ensure that is begins with clean robust data and can operate efficiently from the beginning without being encumbered with the legacy of poor data.
Fulcrum Pipelines Limited	The CRS should manage the address data in one format to be used by all parties utilising the UPRN if necessary. Any party could submit any address information they feel appropriate into the CRS and the CRS is responsible for validating & managing the correct address. The address would be linked to the MPRN &/or the MPAN. Once validated that address would be distributed throughout the industry as the relevant address for a property via an update file flow.
Utilita Energy Ltd	The usual benefits and risks can be expected with implementing an interim process ahead of CRS. The potential benefit of this particular change is that the interim implementation could act as a data cleanse exercise and therefore make later data migration far more straightforward. However the risk in this is that by introducing further data into the market in the attempt to cleanse the data it could upset the current status of data and therefore have a detrimental effect to data migration. With potentially multiple changes to key industry data required there will need to be robust timing and process to ensure that the exercises do not overlap and cause further issues to data.
Electricity North West Limited	We believe that it is essential to have a unique identifier to support the harmonisation process and fully support the proposed options a) and b). We see risks around matching and creation of the CRS may create a higher level of anomalies and exceptions.
Switching/price comparison service 1	Option A makes a start in identifying addresses correctly, but the CRS need to have associated meter information also, so Option A may not go far enough. Overall responsibility for the maintenance of the CRS needs to sit with a government body, outside electricity and gas suppliers themselves. However obligations should be placed on all involved in the energy supply chain to update and contribute to CRS where appropriate. Benefits – reduction in erroneous transfers in the shorter term.

	Risks – possible wasted resource.
SSE Energy Supply Limited	SSE believes there is insufficient information available to judge appropriately and any assessment of changes to address data should include all benefits and not just those attributed to the COS process.
RWE npower	We believe this would be beneficial as we could potentially learn lessons from it.
E.ON	The inclusion of the UPRN in the CRS system will give confidence that the CRS has matched the gas and electricity supplies with a reasonable level of certainty, as the UPRNs won't match if they've been incorrectly assigned to the wrong supply points and matching is address based, or the addresses of the supply points won't match if the matching is by UPRN. Confidence in the dual fuel relationship is key to the success of the central registration process, as it would not be desirable to increase the number of erroneous supply point transfers. Use of the UPRN is not dependent upon CRS delivery, but more reasonably on the ability of the network companies to populate the UPRN into the supply point register.
Wales & West Utilities Ltd	Wales & West Utilities is not providing a response to this question
ElectraLink Limited	One of the key advantages of a central registration system is that it will act as a 'single source of the truth': correct data held once and once only, in a standard format. As we have shown, there is a large amount of incomplete, inaccurate and inconsistent information held across market participants. If the data held currently is not improved now, then the issues that are currently occurring may endure to the central system, and then it would be incumbent on the operator of the system to correct the data held for 50,000,000 meters to ensure standard formatting and sufficient data. If a cross-industry standard for data quality can be introduced now, the implementation of a single central registration system should be much more simple and cost-effective than fixing everything at once while trying to implement a huge system change at the same time.
Money Saving Expert	No response
switching/price comparison service 2	No response
GTC	We do not believe the options in section 6 support the harmonisation of electricity and gas address data within a Centralised Registration Service as they currently stand. There is a considerable amount of work that is still required before we will be able to be confident in the processes and procedures of the UPRN in regards of the new connections process. In this respect we believe that there are risks that are faced which could potentially outweigh any benefits of implementing one of these options. Given that there is still a considerable amount of work to do in order to ensure that the appropriate solution is reached we believe that it would be relevant to incorporate any changes as part of the Next Day Switching Programme. The implementation of the Next Day switching

	will in itself require a thorough investigation of the industry processes relating to switching and it would make sense to be able to include the required investigation work for address data quality within this. Please see our response in section 6.1 which highlights the risks of implementing the change separately at a time where there is already considerable industry systems changes happening.
EDF Energy	We do feel that a consistent approach to address data is required as part of any new central registration process. We feel that further work is required to address issued we have raised though before we can fully assess its usefulness. If these issues are found to be difficult to address then perhaps we should just seek a solution that is relevant to gas and electricity markets in isolation without need for any outside data, which would include UPRN not being available.
Northern Gas Networks	No response
Xoserve Limited	Xoserve is not providing a response to this question.
Money supermarket	Assuming option A means that the data upload from the various parties to the CRS includes the UPRN, these can be used to link the data from the Electricity and Gas industry. If this is not the case, there is little support for the harmonisation in the CRS. Option A is limited to a few parties only. Option B is more beneficial as more parties are involved in the adoption of UPRN. With more parties involved, there is greater opportunity to identify data issues from start to finish in the switching cycle and these can be efficiently fed back to the CRS to resolve at source. Option A and B could be used to create the foundations for the CRS. On their own, they will bring benefits to the industry and customer in terms of increasing data quality. Option B will have a greater impact as it ties together many more parties through the adoption and use of UPRN. A high quality data CRS is essential to streamlining 2 industries into 1. Widespread mandated usage will ensure that there is greater efficiencies within the industries and be foundational to allow customers to eventually take advantage of next day switching.
UK Power Networks	We understand that, like UK Power Networks, a number of distribution businesses have taken the decision to limit disruption to their customers and cleanse their address data prior to the establishment of the CRS, rather than during a migration programme.
ScottishPower	As above. There are currently around 53 million meter points in the UK (based on the smart meter rollout data available) held in disparate registration systems for gas and electricity. Presumably these meter points and their related data will need to cleansed and amalgamated by the CRS. In either case, action to cleanse the address information held by GTs, iGTs DNOs and iDNOs and append a UPRN to these addresses may be beneficial and reduce the risk of incorrect and misaligned data in the CRS.

Scotland and Southern Gas Networks	Implementing a solution ahead of the CRS will mean a duplication of costs for both the gas and electricity industries without the benefits that the Central Registration Service would bring end users.
British Gas	Moving to a common address format with a UPRN applied will support harmonisation, the establishment of CRS and enduring operation of the CRS. The risk of implementing a solution ahead of CRS is evolving requirements leading to multiple changes and costs to the industry.

ADDRESS DATA QUALITY CONSULTATION RESPONSES

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

Respondent	Response
National Grid Distribution	We believe address data quality is a fundamental industry issue which all parties should work together to address.
SmartestEnergy	This consultation seems to assume that the UPRN system is infallible and a natural solution. The UPRN system is not infallible. What would happen if two buildings were knocked together to make a single dwelling? And as the consultation itself points out there are a 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. It also does not have a check digit. In our view the use of UPRN adds no value. As a supplier in the electricity market we believe that the MPAN is all that is required. It seems that the main reason for the proposal is due to poor address quality is causing an increase in the number of erroneous transfers. We do not see this as an issue for us and cannot recall of us ever taking on an MPAN erroneously as a result of address data quality issues. We do not know whether this is a problem inherent in the domestic market or mere carelessness on the part of larger suppliers. Rather than create a unique new reference & system, which will create additional costs from a system perspective (integrating databases etc…), would it not be more appropriate to tackle the suppliers creating this issue?
Northern Powergrid	No Response
Power Data Associates Ltd	I think there is fundamental difficulty with the proposed use of UPRN. The UPRN is about properties, the MPAN & MPRN are about exit points from electricity and gas networks and all this is overlaid with customers. The different identifies are seeking to identify different things for different reasons and with different business drivers. With most proposals of this nature the approach can always be made to work and the normal 80/20 rule will apply that many premises will have a simple relationship between UPRN, MPAN & MPRN. Yet the full benefits will not be realised while there are significant 'exceptional cases' which require a series of business rules to be developed. At this time I doubt if many of the exceptions have been identified or consideration given to how they would be resolved. As always the 'devil is in the detail', but this detail can become a whole new cost to resolve the problems caused by the exceptions. Exceptions will include: • Properties splitting between single and multiple occupation, and reverse case • Landlord supplies to multi-occupancy premises • Unmetered supplies – which are not associated with a single premises • Meter supplies to street furniture – traffic signals, communications cabinets, environmental monitoring equipment, etc.

	• Where gas and electricity metering are split in different buildings – universities, large factories • Where metering is remote from the premises that is supplies – meter cabinet at end of drive to large house, farm, building, etc. • Where a customer has one or more meter points at the same premises, which could be a house, office or university campus UPRN is a tool to solve a problem, consideration of the UPRN needs to be very clear about what problem is seeking to be solved what are the options to solve that problem, and in this case whether UPRN actually can solve the problem. The working group and therefore analysis to date seems to have hooked onto UPRN as the solution and then seeking to justify how it will work. I suspect it needs some further work to define and analyse the root problems. Using a common address format for gas & electricity would been a sensible approach. Identifying/labelling all new and changes exit points with an MPRN/MPAN is a sensible approach. Then the MPAN/MPRN would be related to an address by the Distributor/GT. Then when a meter is fitted it is linked to the correct MPAN/MPRN. Meter(s) will then link to a comms hub. All these relationships can change over time due to changes of exit point, metering or comms arrangements. There is a relationship between a customer and supplier for one or more fuels when the supplier supplies them with both fuels. The communications hub has a relationship with one or more meters with which is it communicating, these meters may be associated with different fuels and customers, particularly in a multi-meter scenario.
ESP Utilities Group	The process of how to get to the end point needs to be further documented; details around costing, data ownership and data maintenance are key.
ESP Electricity Limited	There process of how to get to the end point needs to be further documented. Details around costing, data ownership and data maintenance are key.
Scottish Power Energy Networks	No response
GB Group plc	**Summary of Response** This response to the Consultation Document discusses improvements to address quality that can be realised through a number of different ways including: • The cleansing of legacy address data held by GTs, IGTs, DNOs and IDNOs; • As proposed, the appending of and widespread use of UPRN; • The introduction of codes of practice to instigate new or changed processes at the prebuild/construction/MPAN & MPRN registration/address assignment stages; • Improvements to the customer journey within switching site processes; • Sharing of consumer address data between suppliers/retailers and transporters/distributors; • Use of specialist services and software to cleanse and maintain legacy data; • Use of software and processes to ensure that address updates are applied correctly and in a timely manner;

AddressBase, PAF or a Combination?

Many of the benefits of this exercise could be realised through the use of PAF which although not as complete as AddressBase Premium, would go a long way to meeting the requirements of Options A and B and at a significant cost saving. If the majority of issues are related to residential switches, then PAF together with the Royal Mail Multiple Residence, Alias and the Not Yet Built file may go a long way towards achieving the improvements expected from the changes.

Indeed, our experience has shown that the use of an AddressBase-only solution does have a number of flaws, particularly in the areas of organisation names, the omission of a few areas of the UK and also with a significant time-lag in the provision of details for new-build properties: These may appear on Royal Mail's Not Yet Built file well ahead of AddressBase and with a greater level of address or postcode accuracy.

Ordnance Survey is aware of these inconsistencies and has indicated that it will strive to realise improvements in these areas.

Despite its few drawbacks however, GBG does believe AddressBase to be most comprehensive and accurate representation of the UK building stock and we recommend its use as an address reference but supplemented with data from alternative sources. GBG provides AddressBase solutions for a number of its clients and to compensate for the shortcomings we invariably combine AddressBase with a number of other address reference data sets such as:

- PAF
- PAF Alias File
- Royal Mail Multiple Residence
- Royal Mail Not Yet Built
- Business data (D&B. Market Location, pH etc).

Exception Handling during the matching process

There are a number of companies within the UK that offer address-management products and services and provide AddressBase cleansing and the appending of UPRNs. Most of these products and services will, dependent upon the initial quality of the uncleansed addresses, automatically match around 75-85% of a GT's or DNO's legacy address data with a high measure of accuracy. It is sometimes said that address matching is as much an art as a science and to achieve ever higher match-rates with the same level of confidence requires experience and patience. Generally, as the degree of match-ambiguity rises, there will be a decreasing percentage of accurate matches and an increasing number of false-positive (incorrect) matches.

The generally accepted method for undertaking such address cleansing exercises is to initially set the matching engine threshold levels to be fairly strict, resulting in a highly accurate first pass but with a lower percentage of matched records.

The residue of unmatched addresses are then passed through the engine a second time having modified threshold levels and/or the operating parameters to a slightly more relaxed level, allowing a number of the previously unmatched residues to now match against the AddressBase reference. This technique can be repeated a third or even fourth time until the point is reached at which false-positives matches are observed.

It is critical that following each matching pass, sufficient quality controls are exercised to ensure that ambiguous and incorrect matches are identified and that the cause of each mismatch is understood.

	In summary, it is relatively easy to achieve a reasonable proportion of correctly matched addresses. However, the exception handling process required to further increase the percentage of accurately matched address records is not a simple exercise. If not undertaken with the correct level of due diligence and without adequate quality assurance processes, there is a risk that the number of incorrectly matched records will reach a level at which confidence in the whole database becomes questionable by the end-users. **Exception Handling for un-matched records** Eventually a point will be reached, even using the finest software, that automated matching cannot be reliably used to improve the match rates with confidence. At this stage, manual correction techniques can be used and many of the address management companies' batching software will provide a facility for end-users to review and interactively correct unmatched records. For a database of a few thousand records, this technique is a feasible option. However, even if the automated matching could reliably apply UPRNs to 95% of the MPAN data, this still leaves around 1.5m addresses (a conservative estimate) to me manually corrected. Even after filtering out the 'lower-scoring' unmatched records, this is a considerable task: If a person corrected one address every two minutes it would take them around 30 years working an average working week, to attempt to resolve each address. **Alternative Approaches** The objective of the Address Data Working Group's programme is to propose a solution to the issue around poor quality data which has been correctly identified as one of the main causes for erroneous supplier switches. Whilst it is agreed that there are a number of improvements that can be made through an address improvement programme including the appending and usage of UPRNs, it has been discussed in this response that process change is just as important as good quality data. It is accepted that the switching of unmatched and ambiguous addresses requires special treatment. However, through the refinement of existing procedures and introduction of new processes, the inability to match 100% of supply-point addresses should not preclude any one consumer from switching energy supplier.
UCL Energy Institute	No response
Switch Gas and Electric Limited	No response
First Utility	No response
Western Power Distribution	No comment
Flow Energy	No response
Fulcrum Pipelines Limited	No response

Utilita Energy Ltd	No response
Electricity North West Limited	We would like to have some clarity on likely timescales but believe that the proposals will be of benefit and will deliver improvements in accuracy for our customers
Switching/price comparison service 1	No response
SSE Energy Supply Limited	SSE is supportive of the policy to improve the switching process in a way that is in the best interests of customers. We believe that there is a direct correlation between the speed of transfer and problems for customers in the switching process. If data issues or any problems are identified, suppliers should have sufficient time to identify and rectify problems to ensure a smooth transfer. If the speed of transfer is the primary focus, this could be detrimental to the customer experience. A key theme in Ofgem's customer research was that customers wanted reliability over speed and so we believe this needs to be addressed on our current industry systems, then the impact monitored, before progressing to an expensive high risk programme to radically change the switching system. Furthermore, the industry made significant improvements to the switching timescales through faster switching (17 day switching) by reducing the length of the process after cooling-off from 21 days to around three days. Around the same time Ofgem introduced new licence conditions (SLC14A.10 – 11) that require suppliers to take steps to reduce erroneous transfers. Both initiatives have the potential to improve the switching experience for customers greatly. By placing more emphasis on these initiatives (and any future data quality programmes) the industry could bring benefits to the customer switching experience but at a much lower cost and risk than implementing next-day switching.
RWE npower	No response
E.ON	No response
Wales & West Utilities Ltd	Wales & West Utilities support the use of the UPRN as an additional identifier, which will improve the creation of maintenance of industry address data. However, the complexity of the data cleansing required, the timeline and the cost of implementing the change with all industry parties must not be underestimated.
ElectraLink Limited	To monitor the progress and effectiveness of any proposed data cleansing solutions, ElectraLink's industry-wide view of data transfer, and our ability to produce reporting under our Energy Market Insight services, would be ideally suited to produce regular updates for progress across the whole industry. ElectraLink is well positioned to carry out analysis on the impacts of the changes, such as on numbers of erroneous transfers or failed meter readings.
Money Saving Expert	The perception that switching energy companies is difficult can lead to consumers paying over the odds for their supply, sticking with their current provider as they do not want the hassle of

	resolving complexities if a switch goes wrong. Mismatching of addresses to supply is one of the most frustrating issues for consumers attempting to change suppliers. This is exacerbated by consumers being reliant on energy suppliers keeping their supply information up-to-date and not being able to resolve this themselves. This is difficult to quantify as we don't always get details of unsuccessful switches, but we estimate address issues to be the root cause for around 10%. Many of the address issues our users highlight relate to new builds – therefore the focus of the proposed solutions in this area have the potential to make a significant difference. This is particularly relevant from a money-saving perspective as these consumers are likely to otherwise remain on their deemed suppliers' standard tariff. We support the ADWG's aim of resolving this frustrating issue for users, but do not have a technical view on which of the proposed options is likely to be most successful.
switching/price comparison service 2	UPRNs will not solve the fundamental problems facing energy switching sites, and therefore it makes no sense to introduce them as a customer facing tool to identify an address. They may serve a purpose to ensure the correct supply is transferred, but seems like an unnecessary complication when MPRN or MPAN should be a unique identifier. The switching process is already replete with confusing industry terms and acronyms, for example kWh, Economy 7, Economy 10, Tariff Comparison Rate, TIL, unit rate, standing charge, calorific value etc. Even where the intention is to keep these terms exclusively behind the scenes of the switching process, they inevitably filter through to the customer and add confusion to what should, for the vast majority of people, be a relatively simple process. The addition of an extra industry term seems like a step backwards, particularly if the intent is for UPRNs to be captured at the TPI stage.
GTC	Appendix 1 – Impact of AddressBase licence on an established Independent Gas Transporter. This scenario is based on two hypothetical licenced gas transporters operating in the current regulatory environment. It is assumed that the costs of a licence for each business to use AddressBase is £174,000 per annum and both transporters are required to have this to populate the UPRN field of the supply point addresses they hold. Gas Transporter A has 2 million supply points and operates within a geographical area. Their revenues are determined according to the RIIO-GD1 price control. Their allocated split, according to Section Y the UNC, between the system element and customer element of their annual transportation charge is 70% system to 30% customer. Gas Transporter B has 100,000 supply points (all of which are in Gas Transporter A's geographicalregion) and is an iGT whose revenues are derived using the Relative Price Control principles contained in Special Condition 1. They have a mix of sites with Connected System Exit Points (CSEPs) of various sizes but their average site size results in them receiving 40% of the Single Supply Point (SSP), or 'all the way', equivalent charge. Gas Transporter A is able to add the cost of acquiring an AddressBase licence to their efficiently incurred costs in their business plan (assume this is included prior to or during a mid period reopening of the price control for ease). They, therefore, remain cost neutral through the process as the cost of the licence will be split out between their 2 million supply points. This will result on an average cost of 8.7p per supply point (subject to differences in supply point Annual Quantity andSupply Offtake Quantity) and therefore an increase to annual bills of, on

	average, 8.7p. Despite beingentirely driven by the customer part of the network this increase in cost is split on the basis of Gas Transporter A's existing 70:30 system to customer split as this has been defined on historic costs and is not updated. Gas Transporter B has no mechanism of directly passing on the costs of acquiring the AddressBase product. They are reliant on the increase in the GDN charge being sufficient to cover their increased costs. In this case they will only receive 40% of the annual increase in charge as this is the average proportion of the 'all the way' charge that they receive and the increase in cost has not been allocated directly to the customer element of the charge. This equates to an increase in 3.5p per supply point. The increased costs that they face, however, are in the order of 174p per supply point on average. They will receive revenue for 2% of the increase in their efficiently incurred costs and therefore be 171.5p per supply point worse off than Gas Transporter A.
EDF Energy	At this time we feel that we have highlighted some initial concerns and possible approaches to aligning address data within gas and electricity markets. At this stage though further work is necessary to demine if UPRN is of benefit and how this can be incorporated so it is available to all players involved in customer registrations.
Northern Gas Networks	No response
Xoserve Limited	Xoserve is not providing a response to this question.
Money supermarket	No response.
UK Power Networks	We have no further comments.
ScottishPower	ScottishPower are supportive of the idea to introduce an improved way of managing address data quality. At present, we are unsure of which is the best way of implementing this. Timescales, feasibility and cost-benefit analysis requires exploring.
Scotland and Southern Gas Networks	No response
British Gas	No response