Policy Issue	Package 0: Do nothing	Package 1: Optimise Existing	Package 2: Major Reform	Package 3: Full Reform
1. Central systems and data				
Summary	The existing systems architecture is retained. It is assumed that Project Nexus and CMA reforms have been implemented (in particular PCW access to ECOES/DES).	The existing systems architecture is retained. (In gas, switching is managed by shippers). Legacy systems are modified to shorten the timescale for switching and to improve the reliability of data. In gas, overnight batch processing is retained but all transactions are completed in a single night. It is assumed that Project Nexus and CMA reforms have been implemented (in particular PCW access to ECOES/DES).	A new Central Switching Service (CSS) is introduced to replace the switching functionality previously supported by UKLink and MPRS. In gas, the switching process is managed by suppliers (previously by shippers). It is assumed that Project Nexus and CMA reforms have been implemented (in particular PCW access to ECOES/DES).	Same as Package 2 plus: The ECOES and DES enquiry systems are superseded by a new Market Intelligence Service (MIS). Parts of DES are be retained to provide access to meter reads.
Creation and maintenance of meter points	New meter points are generated in UKLink and MPRS by gas transporters and network operators (in conjunction with suppliers and/or property developers). Changes to meter point status and deletions are processed via UKLink and MPRS.	Same as Package 0 plus: New features are implemented in MPRS to handle: linking Related MPANs, identifying export MPANs; identifying dom/non-dom consumers and identifying MPANs on Private Networks	Same as Package 1 plus: Relevant updates to meter point data are passed from UKLink and MPRS to CSS daily.	Same as Package 2
Processing of switching requests	Gas switches are managed by UKLink. Shippers drive the switching process. Electricity switches are managed by MPRS. Suppliers drive the switching process	Gas switches are managed by UKLink. Shippers drive the switching process. Electricity switches are managed by MPRS. Suppliers drive the switching process. Addresses are held separately by UKLink and MPRS but are matched to a common GB Address List. A Code Body is made responsible for the stewardship of addresses.	CSS processes electricity and gas switches in a harmonised manner (managed by suppliers) and maintains the master records of the registered supplier (and shipper). Agent IDs are submitted with registration requests and pre-validated by CSS. The master record of agent IDs is held by UKLink / MPRS. A 'premises served' address is maintained in CSS and matched to a GB Address List to provide a means of linking meter points at the same address. The DCC is Data Steward for the address matching process. Details of changes to the registered supplier (and shipper) are passed from CSS to MPRS and UKLink at gate closure. Agents (including shippers) are notified of switches (a) at confirmation of the switch and (b) at execution (gate closure).	Same as Package 2
Capture and maintenance of settlement and Use of System (UOS) data	Settlement and UOS parameters are held in UKLink and MPRS: changes to settlement parameters are processed by UKLink and MPRS.	Same as Package 0	Same as Package 0 plus: Relevant updates to settlement and UOS parameters are passed to CSS daily.	Same as Package 2
Capture and maintenance of meter technical details (eg. Meter Serial Number, installation date, manufacturer)	*Gas:* UKLink is the master repository for gas meter asset details held centrally (updated by MAMs). *Electricity:* ECOES is the master repository for electricity meter asset details held centrally (updated by MOPs). *Smart:* DCC's Inventory is the master repository for smart meter asset details.	*Gas* : UKLink is the master repository for gas meter asset details held centrally. MAMs are unbundled into MOP and MAP roles and both MOP ID and MAP ID are recorded in UKLink *Electricity* : Meter asset details currently in ECOES are recorded in MPRS (including MAP ID) *Smart* : DCC's Inventory is the master repository for smart meter asset details.	Same as Package 1	Same as Package 1
Meter reads	*Gas:* Meter readings are accessed via DES. *Electricity:* No meter readings are stored centrally.	Same as Package 0	Same as Package 0	Same as Package 0
Maintenance of MAP data	MAPs maintain their own asset registers and invoicing details. *Gas:* MAP ID is exchanged between MAMs / Suppliers at switch *Electricity:* MAP ID is exchanged between MOPs and Suppliers at switch and recorded on ECOES	MAPs maintain their own asset registers and invoicing details. Gas: MAP ID is held in UKLink and updated by MOP (formerly MAM). MAP is notified of change of shipper Electricity: MAP ID is held in MPRS and updated by MOP. MAP is notified of change of supplier	Same as Package 1 except: In gas the MAP is notified of the change of supplier (shipper ID is included in the notification)	Same as Package 2
Smart meter change of security credentials	The TCoS process applies: the gaining supplier requests DCC to update the security credentials. The implications of changing to the ECoS process will be assessed later in the Programme when the design of ECoS has been developed by SMIP	Same as Package 0	Same as Package 0	Same as Package 0
Access to Market Intelligence Data on meter points	Market Intelligence data is provided by ECOES and DES (or the DCC's smart meter inventory). Access to ECOES and DES is via online enquiry or download. PCWs will have access to ECOES and DES data through an online enquiry service (initiated in response to the CMA remedy) and potentially an API service.	Market Intelligence data is provided by ECOES and DES (or the DCC's smart meter inventory). Access to ECOES and DES is available via online enquiry and API links (to all participants) PCWs have access to ECOES and DES data through an online enquiry service (initiated in response to the CMA remedy) and an API service.	Same as Package 1 plus: ECOES and DES are updated to reflect switching transactions confirmed and executed by CSS.	The Market Intelligence Service (MIS) provides a single point of access to all retail market, settlement and meter asset data for all gas and electricity meter points (i.e. all the data recorded by UKLink, MPRS and CSS). This includes access to data held by the DCC's smart meter inventory (i.e. MIS has an API link to retrieve data from DCC's Inventory). Access to MIS data is via online enquiry or real-time API. Access to 'register data' (i.e. from MPRS, UKLink, CSS, DCC Inventory) can be supplemented by data 'scraped' from transaction flows over the DTN between participants.
2. Communications				

Policy Issue	Package 0: Do nothing	Package 1: Optimise Existing	Package 2: Major Reform	Package 3: Full Reform
Summary	In electricity participants use the Data Transfer Network (DTN) for sending messages. Message formats are defined in the DTC. In gas, the iX network carries switching transactions between shippers and Xoserve: message formats are described in the UKLink Manual. Gas suppliers may use the DTN for inter supplier communications (eg for ETs). Gas metering agents use a range of communications mechanisms including DTN and iX and the message formats for these are defined in SPAA	Same as Package 0	Interactions with CSS are handled by an XML based messaging service with near real time capability. Legacy communication mechanisms are retained to handle other transactions	Interactions with CSS and MIS are handled by an XML based messaging service with near real time capability. Legacy communication mechanisms are retained to handle other transactions
Transaction definitions	In electricity message formats are defined in the Data Transfer Catalogue (DTC). In gas, most switching transactions are defined in the UKLink Manual. There are additional definitions in SPAA for inter-supplier/shipper transactions (eg ETs) and meter agent flows.	Same as Package 0	CSS transactions (including objections) are defined in XML schemas DTC/UKLink Manual/SPAA definitions apply to all other transactions (e.g. agent to agent and supplier to supplier information flows).	Same as Package 2 plus: Interactions with MIS are defined in XML schemas
Network provision	The DTN carries electricity and some gas transactions (e.g. RGMA and NOSI flows); iX is used for other gas transactions (but is not mandatory). (For RFI it is assumed that the proposal - in gas - to use the DTN for Agreed Reads and ETs will be implemented in June 2017)	Same as Package 0	Same as Package 0 plus: For the purpose of the RFI it is assumed that XML messages to/from CSS are carried over the DTN.	For the purpose of RFI analysis, assume that DTN carries new XML messages to/from CSS and to carry all legacy messages relating to data available via MIS. This allows MIS to run enquiries against DTN transactions and 'scrape' out information that is relevant to the enquiry.
Interface between CSS and MPRS, UKLink and DCC Smart Metering	Not relevant	Same as Package 0	For the purpose of the RFI it is assumed that XML messages are carried between these systems over the DTN.	Same as Package 2
3. Operational Requirements				
Switching speed capability	Switches are completed within 21 Calendar days for domestic consumers (as set out in Switching Guarantee). (Note: actual switching speed will be monitored through the RFI and our other monitoring activities.)	Where chosen by the supplier and consumer, a switching request sent by 6pm will have effect at the start of the third working day. Depending on weekends and bank holidays, this allows for a minimum switching period of between 3 and 7 calendar days	Where chosen by the supplier and consumer, a switching request confirmed by the CSS by 'gate closure' (e.g. 5pm) will have effect at the start of the next calendar day	Same as Package 2
Service availability / Performance	Switches are only processed on working days and use overnight batch processing. Performance parameters (e.g. time available to respond to an objection request) are defined as a set number of working days. Access to ECOES/DES enquiry services and DCC Inventory is available [24x7].	Same as Package 0 plus: In gas KPIs are tightened to ensure all transactions are processed in a single night	The CSS operates 24x7x365 to 99.75% availability Registration requests are processed in real-time. Incumbent suppliers are required to raise objections instantly (within 2sec). Incumbent suppliers' objections systems are required to operate 24x7x365 to 99.75% availability. Windows for selected legacy information flows are compressed. The ECOES/DES enquiry services and DCC Inventory are available 24x7x365 to 99.75% availability.	Same as Package 2 other than: Reference to ECOES/DES is replaced by MIS
Security	Existing security controls are retained for accessing MPRS, UKLink, DTN, iX, DCC Gateway and ECOES/DES	Same as Package 0	Same as Package 0 plus: For access to CSS, it should be assumed that JSON type XML messaging will be used based on SAML 128/256 PKI encryption in a web services environment	Same as Package 2 other than: "For access to CSS..." is replaced by "For access to CSS and MIS ..."
Time	All systems operate in local time except DCC smart metering which uses UTC	Same as Package 0	Same as Package 0 plus: 'Gate closure' used within CSS is set so as to allow sufficient time for processing smart meter transactions between then and midnight UTC, in both winter and summer	Same as Package 2
SoLR	Further work by a SMIP workgroup will determine if changes are required to support SoLR for consumers with smart meters. (Note: If the SoLR needs to generate individual switching transactions to take on consumers from a failed supplier, an additional level of processing capacity may be required in the switching systems).	Same as Package 0	Same as Package 0	Same as Package 0
Switching capacity requirements	No changes needed to existing requirements (subject to any additional SoLR requirements)	It is assumed that improvements to the switching arrangements lead to an increase of 20% to the volume of switches	It is assumed that improvements to the switching arrangements lead to an increase of 30% to the volume of switches	Same as Package 2
Consumer facing M-number helpdesk	*Gas:* a centralised helpdesk is operated by GTs *Elec:* separate helpdesks are operated by each DNO	Same as Package 0	A centralised helpdesk is operated by DCC. DCC passes more complex enquiries to existing service providers (i.e. transporters / networks)	Same as Package 2
4. Business Processes / Policy Issues				
Summary	No changes are made to existing processes. These would continue to be separate for gas and electricity and deliver a 21 calendar day switch for consumers	Several key processes are changed under this reform package, including: objections, cooling off and the gas confirmation window. Switching arrangements are harmonised where possible. consumers experience a minimum switching period of 3 to 7 calendar days	Switching arrangements are harmonised across gas and electricity. Consumers can switch next day.	Same as Package 2
Objections	*Electricity:* The incumbent shipper has 5WD to object. *Gas:* There is a variable objection period of between 2 to 7WD that flexes based on the amount of time available prior to the switch	Gas shippers and electricity suppliers have a 'compressed window' of one working day to decide whether to object. Invitations to object received in the morning (e.g. 6am) would need to be responded to by the end of that working day (e.g. 6pm).	The 'instant reactive' approach is implemented: the incumbent supplier is required to respond to a switch loss notification from CSS within 2 seconds.	Same as Package 2
Cooling off	Suppliers schedule the switch to take place after the cooling off period closes. If consumer cancellation not actioned in time then treated as an ET - if valid cancellation received after withdrawal window finishes then handled as consumer returner	A switch can only be executed within the cooling off period if the consumer agrees that supplier can start to charge for energy consumed from the date of the switch (i.e. before the cooling off period has passed). A consumer who cancels is free to choose a new supplier and has the right to revert to 'equivalent terms' from Supplier A. The 'cooled off' consumer has a period of grace of 30 days with Supplier B on the previously chosen terms before being moved to alternative terms.	Same as Package 1	Same as Package 1
Dual fuel – one fail / all fail	Each switch request proceeds independently of any other switch	Same as Package 0	Suppliers may link registration requests such that if one request fails all the linked requests will also fail. Suppliers decide whether to offer the 'one fail all fail' option to the consumer.	Same as Package 2
Standstill	After a switch becomes effective there is a "standstill" period of 10 calendar days in electricity and 14 calendar days in gas during which a second switch cannot take place.	The standstill period is harmonised to [7] calendar days in both industries	CSS maintains a configurable standstill window of up to 10 calendar days. The standstill parameter is set to 5 calendar days for both traditional and smart meters.	Same as Package 2

Policy Issue	Package 0: Do nothing	Package 1: Optimise Existing	Package 2: Major Reform	Package 3: Full Reform
Advanced registration	The gaining supplier/shipper can submit a switching request up to 30WD in advance of the switch date in gas and 28 calendar days in electricity	The advance registration period for gas and electricity is harmonised to 28 calendar days prior to the switch date	Same as Package 1	Same as Package 1
Linking related metering	Gas and electricity meters at a premises are not linked through a common address	Network operators/transporters are responsible for matching the addresses held by UKLink and MPRS to a GB Address List. Network operators and transporters are obliged to provide joint stewardship of addresses	Meter points within a premises are linked to a single address within CSS. Linkages are established by reference to a published GB address list	Same as Package 2
Gas confirmation window	The gas confirmation window is the period between the end of the objection window and the switch date. It is currently set at 2WD At 1pm on D-2 the Gemini system within UKLink sends a report to Non Daily Metered (NDM) shippers on how much gas their sites are expected to off-take	The gas confirmation window is shortened to 1WD An initial Gemini file is sent at 1pm on D-2 with an update file at 1pm on D-1	The gas confirmation window is shortened to between 5pm on D-1 and midnight An initial Gemini file is sent at 1pm on D-2 with an update file at 1pm on day D	Same as Package 2
Agent appointments	Supplier/shipper (or consumer) appointed agents are recorded in MPRS/UKLink. The MAP ID is recorded in ECOES for electricity but there is no central record of MAP ID in gas.	Same as Package 0 plus: The definitions of MOP and MAP are harmonised across gas and electricity. MOP and MAP IDs are recorded in MPRS and UKLink There is no identification of whether agents are consumer-contracted.	Same as Package 1 plus: Agent IDs (DA, DC, MoP) and Shipper ID are submitted by suppliers on registration requests and - after pre-validation - are forwarded to MPRS/UKLink which contain the master records of agent ID. Other agent changes (e.g. supplier procures a new MOP) are input directly to MPRS and UKLink. The presence of consumer-contracted agents is recorded alongside the agent ID.	Same as Package 2
Related MPANs	Suppliers use the Meter Timeswitch Code (MTC) and Standard Settlement Configuration (SSC) data items to identify if electricity MPANs are related and must be switched together. The incumbent supplier can object if one MPAN is switched without the other Related MPAN(s)	Links are established by DNOs between pairs of Related MPANs and these are recorded on MPRS. MPRS only allows the 'parent' MPAN to be switched. The reason code 'Related MPAN' is not a valid criterion for objecting to a switch	Same as Package 1 plus: Related MPANs are uploaded to CSS to facilitate switching	Same as Package 2
Pseudo MPANs	Pseudo MPANs allow the export volume to be divided between multiple suppliers. They are not widely used and are managed by having a single Data Collector. They can be switched independently of each other	Same as Package 0	Same as Package 0	Same as Package 0
Export MPANs	Suppliers use Line Loss Factor (LLF) data to determine if MPAN is export	An indicator of import/export is maintained for each MPAN by DNOs and recorded in MPRS	Same as Package 1 plus: The import/export indicator is uploaded to CSS.	Same as Package 2
Private electricity networks	DNOs create MPANs on request for sites on private networks that are within their distribution areas. These MPANs are maintained within MPRS and can be switched in the same way as MPANs situated on a DNO/iDNO network	Same as Package 0	Same as Package 0 plus: MPANs on Private Electricity Networks are switched using CSS	Same as Package 2
Domestic/non-domestic	Gas shippers notify UKLink on whether a site is domestic or non-domestic. UKLink retains this indicator. There is no dom/non-dom indicator in electricity but this can currently be derived using profile class information	Same as Package 0 plus: A dom/non-dom indicator is maintained in MPRS (updated by the registered supplier)	A dom/non-dom indicator is maintained in MPRS and UKLink (updated by the registered supplier) The dom/non-dom indicator is submitted by suppliers on the registration request and processed by CSS	Same as Package 2
ET resolution and avoidance	This issue is being addressed by an industry led review	Same as Package 0	Same as Package 0	Same as Package 0
Interactions with smart metering	Interim arrangements have been developed to handle the handover of smart meters and agreement of the CoS read (P302) Meters in PPM mode are to be configured to credit mode ahead of a switch.	Same as Package 0	Reconfiguration of smart meters occurs (subject to any communication issues) between 'gate closure' and midnight UTC. The Daily Read Log is used as the basis of the switch read. Meters being operated in PPM mode are changed to credit mode prior to reconfiguration by the gaining supplier. A communications failure to a smart meter will not cause the switch to be aborted.	Same as Package 2
Gas Large Supply Point (LSP) nomination request	The shipper must request gas transportation data for LSP sites from Xoserve before submitting a switching request (a nomination request)	Nomination requests are no longer part of the switching process for LSP sites. Shippers and suppliers to LSP sites access transportation prices and related data from a new system operated by Xoserve	Same as Package 1	Same as Package 1
5. Delivery Strategy				
Transition strategy	Not required	Co-ordination will be required to implement changes to gas and electricity systems so that transition can be implemented as a single event ('big bang'). Some aspects (objections, cooling off etc) may still be delivered ahead of implementation.	There will be a single cut-over to the new switching arrangements (i.e. big bang)	Transition will proceed in two stages: the MIS will be implemented in Stage 1 followed by CSS in Stage 2.
Data migration	Not required	Gas: MAM IDs will need to be converted to MOP ID and MAP ID will need to be captured in UKLink.	Same as Package 1 plus: Meter Comms Provider will need to be captured. Selected meter point data will need to be migrated from UKLink/MPRS to CSS.	Same as Package 2 plus: The extent of data migration depends on whether MIS retrieves data on demand or is established as a 'mirror database'. In the latter case there will be a requirement to complete initial population of the MIS database prior to cut-over (this may be required for both stages)
Data cleanse	Not required	Electricity: Various data items will need to be migrated to MPRS, including Meter Serial Number, installation data and MAP ID (from ECOES), Import/export and dom/non-dom indicators. Related MPANs will need to be identified and recorded in MPRS.	Premises Served Addresses recorded in CSS will need to be linked to a GB Address File	Same as Package 2
Data stewardship role	Not required	Obligations will be placed on network operators / transporters to coordinate their activities in relation to address matching	Same as Package 1 plus: DCC will act as data steward for linked addresses	Same as Package 1
Systems integrator	Not required	Systems Integration function may be required subject to assessment of complexity of new arrangements.	Required	Required
Testing strategy	Not required	Procurement of new systems is likely to required some end-to-end testing, although this will be less onerous than that under RP2 and RP3.	Extensive end-to-end testing will be required to ensure that participants can interact with the new CSS and the modified UKLink and MPRS systems. Testing will also be required to provide assurance that legacy arrangements are not upset by the introduction of CSS	Same as Package 2 plus: Separate periods of testing will be required for each implementation stage
Post implementation strategy	Not required	Some post-implementation support may be required due to complexity of the new arrangements	A post-implementation support team is expected to be required.	Same as Package 2
6. Governance Framework				
Governance framework	Existing code and licence framework	The existing Licence framework will continue. The existing Codes will be retained and/or subsumed within a new Retail Code or the SEC.	Same as Package 1	Same as Package 1