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Memo

DCG Subgroup 2 Interim Interoperability - Requirements

This paper presents a view of potential common requirements for Interim Interoperability Arrangements (IIA).

From	DCG Subgroup 2
To	DCG
cc	
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Introduction
This paper presents a view of potential common requirements for Interim Interoperability Arrangements (IIA) and follows from the paper describing principles and issues.

Requirements
Some core requirements have been distilled from a variety of inputs and levels of specification and they are presented below.

In order to conceptualise any IIA, the role of a Service Provider has been used to illustrate functions that could be performed by one or many participants in any solution options or approaches.

Req	Requirement
1	The IIA shall apply to gas and electricity meters
2	The IIA shall be common for all Suppliers
3	The IIA shall normally to use existing industry dataflows and processes wherever possible.
4	The IIA shall seek to reduce any requirements for site visits or meter exchanges
5	The end-to-end IIA infrastructure shall be secure in its' design and operation
6	The IIA shall protect customer privacy in its' design and operation
7	The IIA shall enable Suppliers to continue to bill customers correctly and automatically
8	The IIA shall be commercially accessible and implementable for any Supplier who considers participating
9	All smart meters and associated equipment under IIA shall be identifiable within industry arrangements and particularly at Change of Supplier (CoS)
10	The same CoS reading should be used by the gaining and losing Supplier
11	Only Authorised Parties should have access to their authorised data
12	The gaining Supplier should only have access to the metering system/data from its Supplier Start Date (SSD)
13	The losing Supplier should not have access to the metering system/data from the gaining Supplier's SSD
14	The customer has the ability to decide who has access to its data
15	If the losing Supplier is operating the smart meter in Prepayment/PAYG mode, then it must switch the smart meter to credit mode on Change of Supplier
16	On change of Supplier, there must be certainty that there is a successful transfer of communications/access from the losing Supplier to the gaining Supplier. There must be continuity of communications services.

Issues

1. Are requirements 5 & 11-14 explicit enough to cover Access Control? The delivery of ongoing security across a Change of Supplier (CoS) is a clear requirement, but how it is achieved will be a function of the IIA solution option.
2. Meter activity at CoS needs to be clarified – is the losing Supplier data (tariffs, settings) removed? This may cause issues for the customer and their IHD if the incoming Supplier does not plan to use the meter in a 'smart' manner. It is suggested that a paper to present the practicalities of action at the meter at Change of Supplier is developed and that this should be passed to SMDG as part of technical design (this will need to be resolved for enduring as well as interim arrangements).
3. Meter activity at Change of Tenancy (CoT) also needs to be robustly developed and it is suggested that a paper to present the practicalities of action at the meter at Change of Tenancy

is developed and that this should be passed to SMDG as part of technical design (this will need to be resolved for enduring as well as interim arrangements).

4. Broadcast messaging (the example used was radio teleswitching) was considered to be out of scope in considerations, however, the potential need for firmware/software upgrade over WAN communications introduced this as potentially essential. This will need to be resolved.

Potential IIA Services - Services Analysis from Prospectus

The subgroup considered all of the general and operational services from the Statement of Design Requirements within the Prospectus and considered which of those services were seen as essential, desirable or unnecessary for interim arrangements. This analysis gives consistency against the current Prospectus definition and allows solution options to be assessed for delivery capability.

The results of this analysis are set out below:

Ref	Service	
1.53	Registration of smart meter	**Unnecessary**
1.54	Check accuracy of master clock data	**Desirable**
1.55	Tamper alarm triggered	**Desirable**
1.56	Meter fault alarm triggered	**Desirable**
1.58	Diagnostics	**Desirable**
1.57	Firmware / software upgrade	**Essential (for security upgrades)**
1.59	Test communication line	**Essential**
1.60	Service life notification	**Unnecessary**
1.61	Message to consumers (IHD)	**Unnecessary**
1.62	Download / clear existing data	**Desirable/Essential – depends on solution at CoS**
1.63	Remote configuration of settings	**Service needs better definition**
1.65	Meter read	**Essential**
1.66	Energisation status check	**Unnecessary**
1.67	Remote enablement / disablement of supply	**Desirable**
1.68	Consumer interaction	**Essential if 1.67 included Otherwise Unnecessary**
1.69	Switch between credit and prepayment	**Unnecessary, on assumption switch to credit at CoS**
1.70	Prepayment	**Unnecessary – Supplier specific solutions**
1.71	Credit balance update	**Unnecessary – Supplier specific solutions**
1.72	Tariff update	**Desirable**
1.73	Supply fault alarm triggered	**Desirable**
1.74	Maximum demand read	**Essential – another type of read**
1.75	Notification of failure to obtain reading	**Essential**
1.77	Calorific value	**Unnecessary**
1.79	Read distributed generation and storage data	**Unnecessary**
1.80	Feed in tariff Update	**Unnecessary**
1.83	Electricity quality read	**Unnecessary**
1.89	Load management	**Unnecessary**

It is taken as a precondition that all of the functionality of smart meters will be available in the assets deployed in the interim arrangements, so the subgroup undertook analysis of which elements of smart meter functionality we would expect to be used under IIA services. These are included below as a further check against the service catalogue:

	High-level functionality	Category of Services that will use this functionality
A	Remote provision of accurate reads/information for defined time periods - delivery of information to customers, suppliers and other designated market organisation	Essential
B	Two way communications to the meter system; communications between the meter and energy supplier or other designated market organisation; upload and download data through a link to the wide area network; transfer data at defined periods; remote configuration and diagnostics, software and firmware changes	Essential to have 2-way communications, but some services across it desirable
C	Home area network based on open standards and protocols; provide "real time" information to an in-home display; enable other devices to link to the meter system	Essential
D	Support for a range of time of use tariffs; multiple registers within the meter for billing purposes	Desirable
E	Load management capability to deliver demand side management; ability to remotely control electricity load for more sophisticated control of devices in the home	Unnecessary
F	Remote disablement and enablement of supply that will support remote switching between credit and pre-pay	Unnecessary. But desirable for remote disablement for other reasons (e.g. CoT, idle services)
G	Exported electricity measurement; measure net export	Unnecessary
H	Capacity to communicate with a measurement device within a microgenerator; receive, store, communicate total generation for billing	Unnecessary

Potential services raised in development that are not covered above is:

1. Maintain auditable records of meter interactions
2. Query software and firmware versions from meter and associated devices - Desirable

Dependencies

1. The impact of any LCNF projects will need to be assessed to see if they introduce requirements on interim arrangements.
2. Impact/Update from final output of SMDG/DCG needs to be assessed for consistency.
3. Dependency on DCG/SMDG to provide industry interface definition for the enduring arrangements (e.g. web services), so that they can be considered for inclusion in any interim arrangements.
4. Development paper on the practicalities of action at the meter at Change of Supplier from SMDG as part of technical design (this will need to be resolved for enduring as well as interim arrangements).
5. Development paper on the practicalities of action at the meter at Change of Tenancy from SMDG as part of technical design (this will need to be resolved for enduring as well as interim arrangements).
6. Consideration from DCG/SMDG of the services not yet covered above.