Prepayment Workshop

8 December 2010
Workshop Agenda

1. Introduction and workshop objectives
2. Objectives of prepayment under smart metering
3. Requirements of ‘smart PPM’ after DCC Go Live
4. Requirements of ‘smart PPM’ during the period from Tech Spec to Go Live
Workshop Objectives

• Identify key requirements that need to be addressed by smart metering technical spec

• Identify the key responsibilities of DCC in relation to ‘smart PPM’

• Identify options for supporting prepayment during the Tech Spec to Go Live stage
Objectives for Prepayment under Smart Metering

• To ensure that ‘smart PPM’ customers enjoy at least the same level of service and protection as ‘trad PPM’ customers

• To provide suppliers with the capability to offer prepay options which:
  – Facilitate innovative payment channels, thereby stimulating retail competition
  – Support improved management of debt
  – Reduce/eliminate the price premium paid by PPM customers

• To protect against fraud and minimise the volume of misdirected payments

• To provide seamless transition from interim arrangements to the permanent solution
Context for Workshop Discussions

• Assume DCC Scope covers Option 1 initially:
  – Secure access control
  – Translation
  – Scheduled data retrieval
  .... Under this option DCC has contractual relationships with service users to carry data securely to / from smart meters

• The focus of the workshop is on Tech Spec to Go Live stage and post-Go Live

• During the Tech Spec to Go Live period the options at CoS are:
  – ‘Gaining supplier’ can request ‘installing supplier’ to operate the smart meter on its behalf
  – ‘Gaining supplier’ can take over the meter, install its own comms and operate the meter as part of its own fleet
Requirements for PPM after DCC Go Live

**Consumer Protection**
- ‘Safe and reasonably practical’ for customer to operate prepay
- 7 days notice to switch to PPM
- Warning of imminent disconnection
- Emergency & friendly credit
- Flexible debt repayment arrangements
- Availability of cash top-up outlets
- Customer does not suffer if payment is misdirected

**Smart Metering System**
- Remotely switchable between credit and prepay modes
- Electronic top-up facility (including validating one-time use of UTRN)
- Display of ‘running balances’ (credit and debt)
- Warning of low credit
- Configurable emergency & friendly credit
- Configurable debt recovery
- Manual top-up facility (including validating one-time use of UTRN)
- Generation of ‘events’ to notify suppliers of self-disconnections, etc
- Safe re-enablement
- Comply with security framework

**DCC**
- Access control of top-up requests
- Secure transfer of top-ups
- Generation of UTRNs
- Access control and secure transfer of configuration parameters
- Distribution of ‘events’ to suppliers
## Responsibilities of DCC after Go Live

<table>
<thead>
<tr>
<th>DCC</th>
<th>What validation and/or other activities should be performed by DCC?</th>
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<td>Access control of top-up requests</td>
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Operational requirements for PPM after DCC Go Live

Consumer Protection

- ‘Safe and reasonably practical’ for customer to operate prepay
- 7 days notice to switch to PPM
- Warning of imminent disconnection
- Emergency & friendly credit
- Flexible debt repayment arrangements
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Customer: suppliers to identify customers unable to operate under prepayment

Meter location: what functions should a ‘prepay IHD’ support if meter not accessible or if HAN unreliable?

Will customer be able to ‘top-up’ their account during 7 day notice period or will supplier provide initial top-up?

What form of warning is needed prior to disconnection?

SM Design requires meter to support configurable regimes for emergency & friendly credit and debt recovery

Continuation of current arrangements

How should top-up systems be designed to ensure that payment always results in top-up?
Requirements for PPM after DCC Go Live

Smart Metering System
- Remotely switchable between credit and prepay modes
- Electronic top-up facility (including validating one-time use of UTRN)
- Display of ‘running balance’
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- Configurable emergency & friendly credit
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- Generation of ‘events’ to notify suppliers of self-disconnections, etc
- Safe re-enablement
- Comply with security framework

How to ensure that customer will see balance and low credit warning?
Will manual top-up be via the meter or IHD? Will ‘2-button’ input be sufficient? Are there circumstances (e.g. poor WAN connection) where keypad is needed? If IHD is used will the HAN connection be sufficiently reliable?
Will reset button always be located on the meter or could it be on the IHD (but battery needed)?
How will security keys be assigned?
Options at CoS during ‘interim’ – Option A

Before CoS

- Meter
- ‘Head-end’ System
- Billing & Customer Mgmt System
- Payment Agent Systems

Installing Supplier
Gaining Supplier

After CoS

- Meter
- ‘Head-end’ System
- Billing & Customer Mgmt System
- Payment Agent Systems

Installing Supplier
Gaining Supplier

Gaining supplier uses Installing Supplier as ‘Smart Meter’ Agent
Options at CoS during ‘interim’ – Option A

Before CoS

Meter → ‘Head-end’ System → Billing & Customer Mgmt System → Payment Agent Systems

Installing Supplier

Gaining Supplier

After CoS

Could top-up UTRNs be entered manually while meters operated by installing supplier?

Gaining supplier uses Installing Supplier as ‘Smart Meter’ Agent

Meter reading requests might be passed via DTN/UKLink but what about top-ups?

Installing Supplier

Gaining Supplier
Options at CoS during ‘interim’ – Option B

Before CoS

- Meter
- ‘Head-end’ System
- Billing & Customer Mgmt System
- Payment Agent Systems

Installing Supplier

Gaining Supplier

After CoS

- Meter
- ‘Head-end’ System
- Billing & Customer Mgmt System
- Payment Agent Systems

Installing Supplier

Gaining Supplier

Gaining supplier installs own comms and operates as part of its smart meter fleet
Options at CoS during ‘interim’ – Split Fuels

Before CoS

- Meter
- Meter
- WANCM

‘Head-end’ System

Billing & Customer Mgmt System

Payment Agent Systems

Installing Supplier

Gaining Supplier

After CoS

- Meter
- Meter
- WANCM

‘Head-end’ System

Billing & Customer Mgmt System

Payment Agent Systems

Installing Supplier

Gaining Supplier

Gaining supplier has to install own WANCM as well as comms
## Checklist of issues

<table>
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<th>Security Requirements</th>
<th>Top-up Requirements</th>
<th>Interim Arrangements</th>
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Additional Material
Top-Up Payments

Customer enters UTRN manually if WAN unavailable

DCC generates UTRN

DCC verifies against master register

Green = valid

Red = invalid

Meter

DCC

Supplier checks account and passes top-up request to DCC

Suppliers record payment & pass UTRN to Agent

Agent checks valid agency and passes details to supplier

Agent takes payment & prints receipt (including UTRN)

Customer takes receipt

Customer presents ID & payment

Customer advised details invalid (and new supplier is)

Customer enters UTRN manually if WAN unavailable