



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

## CER National Smart Metering Programme **Smart Pay As You Go**

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## CER – Information Page

### Abstract:

The National Smart Metering Programme (NSMP) is a plan for upgrading how electricity and gas retail markets operate. The upgrade will provide consumers with more accurate bills, better and more accessible information about energy use, and access to new tariffs and services. As part of the NSMP, the CER is reviewing and updating consumer policy in order to be ready for these new developments.

One aspect of the upgrade is a change to the way that prepayment or Pay As You Go (PAYG) services are delivered to customers. Customers use prepayment/PAYG services when they want to pay for their gas and electricity in advance, purchasing credit that they can then use.

The CER is issuing this consultation paper to gather views and evidence, with a view to making a decision later this year. The consultation builds on a set of decisions published by the CER in October 2014 and is published in the context of the overall programme as described in the Phase 3 Overview<sup>1</sup> note.

### Target Audience:

This paper is for the attention of members of the public, the energy industry, customers and all interested parties.

### Related Documents:

- NSMP documentation is available on the CER website ([www.cer.ie](http://www.cer.ie))

Responses to this consultation should be returned by emailing [smartmetering@cer.ie](mailto:smartmetering@cer.ie), post or fax and marked for the attention of the Smart Metering Programme Office at the CER.

**The CER intends to publish all submissions received.** Respondents who do not wish part of their submission to be published should mark this area clearly and separately or enclose it in an Appendix, stating the rationale for not publishing this part of their comments.

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<sup>1</sup> Phase 3 Overview CER/15/052

## Executive Summary

The National Smart Metering Programme (NSMP) is a plan for upgrading how electricity and gas retail markets operate, in order to improve levels of service for all customers. It is similar in nature to the move from analogue to digital in the markets for communications services.

The CER's decision to rollout electricity and gas smart meters for all residential and small and medium sized businesses was announced in July 2012. This decision was made following comprehensive customer behaviour and technology trials and cost-benefit analyses, and in the context of the European Third Package Directive provisions for the rollout of smart meters in Member States to at least 80% of electricity consumers by 2020 if there is a positive cost benefit analysis.

Consistent with maintaining a consumer-centric approach to the NSMP, the CER is reviewing and updating consumer policy in order to be ready for these new developments. This affects a wide range of areas, including what tariffs are on offer, how billing and other information is provided to consumers, and the framework for customer protection. The updated consumer policy framework needs to provide appropriate levels of support and protection across all types of consumers.

One of the biggest changes that the NSMP will bring is changing the way that prepayment, or Pay As You Go (PAYG) energy services are provided to customers.

PAYG customers pay in advance for their energy, by buying small amounts of credit online or in a shop. The customer adds these credits, or "top ups" to their electricity or gas meter so that they can access the credit. If the customer runs out of credit then their energy supply will automatically disconnect until they add more credit. Customers can see how much credit they have left by looking at a screen on their meter.

At the moment, around 10-15% of electricity and gas customers choose PAYG, usually customers choose PAYG because it allows them to manage their energy costs tightly. There are some disadvantages of the current PAYG set up – for example, when a customer chooses PAYG they will need a new meter installed, which can be expensive.

### Context

The NSMP reforms to the services that customers receive are facilitated by ESB Networks (ESBN) and Gas Networks Ireland (GNI) rolling out new meters, and a supporting communications infrastructure, to all domestic and smaller business

customers. This creates a technical platform for collecting detailed, accurate data, and for automating activities that currently require manual intervention and site visits.

The new technical platform and the associated changes to how retail markets operate will change fundamentally the services that customers receive, in three key ways:

- First, there will be much more information available on how individual consumers are using energy, and this will in turn make bills more accurate. Further, there will be flexibility in how these data are processed and presented back to consumers. For example, through a display device in the home, or an application on a mobile phone – in turn giving consumers greater understanding of and control over how they use energy.
- Second, it will make accurate billing of time-of-use tariffs available to all. Currently, access to tariffs which allow customers to save money by using energy off-peak requires the installation of a special meter, and is limited to a relatively small number of customers with Day/Night Metering. It also increases the potential range and flexibility of such tariffs. This creates opportunities for consumers, although these are likely to vary between customers, or (potentially) classes of customer.
- Third, it will remove the need for a site visit, and the installation of additional metering equipment, for customers moving to a “Pay As You Go” tariff.

The new platform will also improve the quality of existing services. For example, an actual meter reading for a bill (including for a closing bill when a customer changes supplier) will be available almost immediately. Hence, the risk of a customer being surprised by a high bill (or building up a positive balance) as a result of previous bills being based on estimates should be virtually removed.

### **Smart Pay As You Go**

The NSMP will introduce smart PAYG. Smart PAYG will operate using different technology to the current (non-smart) PAYG service – with the focus shifting from the customer interacting with the meter, to a model based on the customer-supplier interaction, where the only data held on the meter will be the recorded energy consumption.

The CER is taking a consumer centric approach to the NSMP and the rollout of smart meters with a focus on the development of consumer policy and services. The programme will also take account of the particular requirements of different customer groups including vulnerable customers and those in financial hardship.

Under smart PAYG, the customer's credit balance will no longer be held on the PAYG meter, and instead, the supplier will calculate the customer's credit balance in their system, using meter reads (delivered from the smart meter remotely via the Network) and customer top ups (delivered from their payment provider, or through the suppliers own systems).

This will mean that customers no longer have to add credit directly to the meter, as the credit will be added to the customers balance within the supplier's system.

This approach will also allow an improvement to the information that suppliers can provide to customers, such as low balance alerts as these no longer need to be driven by the meter. However, it will also mean that the current balance is not necessarily available for the customer to view in their home. In this phase, the CER is considering the minimum acceptable experience for customers in viewing their current balance, both inside and outside the home.

Because the supplier holds the balance, the meter will no longer determine when the balance is zero and an automatic disconnect is required, or when the customer has bought more credit and a reconnect is needed. These determinations will now take place in the supplier system and will be communicated to the meter via the smart communications infrastructure.

This represents an important change, because at the moment, in non-smart PAYG, we don't need to consider how quickly a customer is reconnected, as this will happen automatically as soon as credit is added. For smart PAYG, speed of the reconnection could vary based on how quickly the reconnection message is sent. In this phase, the CER is considering what regulation is needed to ensure customers are reconnected when they have bought more credit.

In this paper, we are seeking the view of the public and the CER's stakeholders with regard to whether and where further policy is required (and equally not required) to ensure PAYG smart services deliver an appropriate customer experience and facilitate competition between suppliers.

### **Consultation process**

The CER invites all interested parties: members of the public, the energy industry, and customers, to comment on the questions raised in this consultation paper by close of business on Tuesday 12 May 2015. These responses will inform a follow-up paper planned for publication in July 2015.

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## 1.0 Introduction

### 1.1 Purpose of this paper

The purpose of this paper is to seek the view of the public and the CER's stakeholders with regard to whether and where further policy is required (and equally not required) to ensure PAYG smart services deliver an appropriate customer experience and facilitate competition between suppliers. In order to make an informed and impartial decision on this topic, the CER wishes to obtain comments from members of the public, the energy industry, customers and all interested parties. The CER commits to considering all views equally and affording each respondent the opportunity to clarify any issue raised in this paper.

### 1.2 Background Information

This document builds on a significant body of information and analysis conducted by the CER as part of the National Smart Metering Programme (NSMP) and forms a key part of the work that the CER is undertaking in this phase of the programme.

This document has been produced in the context of the overall programme as described in the Phase 3 Overview<sup>1</sup> note and is one of three documents (one information paper and two consultation papers) that the CER have published at this time. The full set of documents is available on the CER website<sup>2</sup>.

Given the volume of information available, a summary of the context for this consultation is included in section 2.

### 1.3 Structure of this paper

This paper is structured in the following manner:

- **Section 2** outlines the **market context** for this consultation paper, including the current regulatory framework for PAYG and the policy decisions already made for smart PAYG;
- **Sections 3** describes the **range of possible PAYG policy frameworks** in the context of the decisions that have already been made and sets out some **plausible examples** for the detailed policy design along the

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<sup>2</sup> The other two papers in the set are the TOU Consultation CER/15/055 and Policy Roadmap Information Paper CER/15/053.

spectrum of possible decisions, alongside **an initial assessment** of each of these;

- Each sub-section within Section 3.0 includes a list of direct questions related to that proposal. To aid regulatory transparency and assist in the delivery of an efficient consultative and decision making process, the CER asks respondents to address these questions directly in their responses;
- **Section 4** contains an **overall summary of the proposals being outlined** in this paper and outlines the **CER's proposed timetable** for this consultation and for the delivery of a decision on the topic of this consultation.

**Appendix A** contains a summary list of all of the questions, which the CER has asked in this Consultation Paper. This is designed to be a useful aid to respondents when preparing their submissions and can also serve as a “short-cut” for respondents who may not have the resources to devote to preparing a full submission.

### ***1.4 Responding to this paper***

CER invites all interested parties: members of the public, the energy industry, and customers, to comment on the questions raised in this consultation paper by close of business on Tuesday 12 May 2015.

As CER will publish responses in full on the CER website, respondents should include any confidential information in a separate Annex, stating the rationale for not publishing this part of their comments.

Please forward submissions on this paper (preferably in electronic format) to:

Smart Metering Programme Office  
Commission for Energy Regulation,  
The Exchange, Belgard Square North,  
Tallaght,  
Dublin 24.

E-mail: [smartmetering@cer.ie](mailto:smartmetering@cer.ie)

## 2.0 Context

### 2.1 Summary

This section provides an overview of the products available in the market for customers who want to pay in advance for their energy now, and sets out the customer experience that they might expect to receive. The section also describes the current policy framework under which these products are regulated.

This section provides brief context on how PAYG fits with the National Smart Metering Programme (NSMP) and sets out the decisions that have already been made in relation to how PAYG is delivered in the smart world.

### 2.2 The NSMP and the retail market

The National Smart Metering Programme (NSMP) is a plan for upgrading how electricity and gas retail markets operate, in order to improve levels of service for all customers. It is similar in nature to the move from analogue to digital in the markets for communications services. It is underpinned by a set of strategic objectives that relate to a wide range of features of the energy market, and how it serves customers. The strategic objectives are set out for reference in Appendix C.

The CER's decision to rollout electricity and gas smart meters for all residential and small and medium sized businesses was announced in July 2012<sup>3</sup>. This decision was made following a comprehensive customer behaviour and technology trials and cost-benefit analyses, and in the context of the European Third Package Directive provisions for the rollout of smart meters in Member States to at least 80% of electricity consumers by 2020 if there is a positive cost benefit analysis.

The CER is taking a consumer centric approach to the NSMP and the rollout of Smart Meters with a focus on the development of consumer policy and services in the areas of Time-of-Use Tariffs, PAYG services, Customer Protection, Customer Information and Participation. The programme will also take account of the particular requirements of different customer groups including vulnerable customers and those in financial hardship.

The changes in services experienced by customers are facilitated by technical changes to how retail markets operate. The systems and process that underpin the services that suppliers provide to customers will be based on much more

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<sup>3</sup> NSMP Phase 1 Decision CER/12/008

detailed, up-to-date consumption data, collected remotely every day. These technical changes will be complemented by an updated framework of customer policy and protection, including appropriate protections in respect of data privacy.

Currently, the services that a bill customer receives are based on a manual meter reading taken once every two months (at most), plus ad hoc reads taken when a customer switches supplier or changes address. Changes to the service, e.g. to reconnect or to become a prepayment customer, require a site visit by an engineer.

The new platform for services will be based on half-hourly meter reading, collected remotely every day – with data from the meter also being ‘broadcast’ securely for access by the customer within the home. Changes to the service will generally be capable of being made remotely, without the need for a visit from an engineer<sup>4</sup>. This new platform will be made available by ESB Networks (ESBN) and Gas Networks Ireland (GNI) rolling out new meters, and a supporting communications infrastructure.

This new technical platform will change fundamentally the services that customers receives, in three key ways:

- First, there will be much more information available to individual consumers on how they are using energy, and this will in turn make bills more accurate. Further, there will be flexibility in how these data are processed and presented back to consumers. For example, through a display device in the home, or an application on a mobile phone.
- Second, it will make time-of-use tariffs available to all. Currently, access to tariffs which allow customers to save money by using energy off-peak requires the installation of a special meter, and is limited to a relatively small number of domestic customers with Day/Night metering. It also increases the potential range and flexibility of such tariffs.
- Third, it will remove the need for a site visit, and the installation of additional metering equipment, for customers moving to a “Pay As You Go” tariff.

The new platform will also improve the quality of existing services. For example, an actual meter reading for a bill (including for a closing bill when a customer changes supplier) will be available much more quickly. Hence, the risk of a customer being surprised by a high bill (or building up a positive balance) as a result of previous bills being based on estimates should be virtually removed.

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<sup>4</sup> It should be noted that this does not preclude requiring a presence on site in certain circumstances in the context of consumer protection – an issue that will be considered by the CER in due course through related NSMP policy development work.

The process of procuring and installing the new technical platform is due to commence this year, with ESNB's initiation of its procurement process for meters and communications.

### **2.2.1 The October 2014 Decision on PAYG**

In October 2014, the CER published a set of decisions that finalised the High Level Design for the NSMP. This included decisions on smart PAYG<sup>5</sup>.

In essence, this determined that smart PAYG will be based on a model where the all meters will be capable of operating a PAYG or credit payment method. The only data held by the meter is the recorded energy consumption, and the calculation of the customer's balance will be carried out in the supplier's system. This means that to switch a customer from Bill Pay to a PAYG tariff will not require a meter replacement. This represents a real benefit to customers, because under smart PAYG there will no longer be any additional meter installation costs (whether these are to be socialised or not) associated with switching to a PAYG service.

The supplier will calculate the PAYG customer's credit balance in their system, using the meter reads (delivered from the smart meter remotely via the Network) and customer top ups (delivered from their payment provider, or through the supplier's own systems). This will mean that customers no longer have to add credit directly to the meter, as the credit will be added to the customers balance within the supplier's system. Hence, a communication will be required from the system to the meter to allow power to flow.

This approach will allow a step change in the information that suppliers can provide to customers, such as low balance alerts as these no longer need to be driven by the meter. Instead of being restricted to a simple beep when the meter hits a hardcoded balance, suppliers will be able to offer customised alerts, varying parameters like the alert threshold, channel, number of alerts sent and the information contained within each alert to suit customer requirements.

Because the supplier holds the balance, the meter will no longer determine when the balance is zero and an automatic disconnect is required, or when the customer has bought more credit and a reconnect is needed. Instead, these determinations will now take place in the supplier system and will be communicated to the meter via the smart communications infrastructure.

Further details of the October 2014 decision are available on the [CER website](#).

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<sup>5</sup> High Level Design PAYG CER/14/046D

## **2.3 Current (non-smart) PAYG arrangements**

In the current (non-smart) electricity and gas markets, customers can choose whether to pay for their energy in advance or after they have used it. Customers who pay in advance are often described as prepayment, or PAYG customers and customers who pay later are described as Bill Pay or credit customers.

This paper focuses solely on PAYG customers. Currently, almost 10% of electricity and 14% of gas residential premises have PAYG meters installed<sup>6</sup>.

PAYG can offer real benefits for customers who wish to carefully budget for their energy use, removing the worry of a large bill. Instead, customers buy energy in small manageable amounts (usually online or in a shop) and then add this credit directly onto their meter or alternate control device. This is called a “top up”.

PAYG is also of benefit to suppliers, as it prevents customers accruing large debts that they struggle to pay (hence reducing bad debt), and it can be used where a customer has already run up a debt and needs to make repayments over time. In this instance up to 25% of each of the customer’s top ups will go towards repaying the customer’s outstanding debt.

One feature of the current (non-smart) PAYG service is that a new meter needs to be installed when a bill pay customer wants to become a PAYG customer (and an installation visit may also be required when a PAYG customer switches to an alternative PAYG service). This installation generates an additional cost. In addition, when a customer runs out of credit, the meter (or Budget Controller – see section 2.3.1) will automatically disconnect the customer’s energy supply to prevent them using any more energy. The CER has put in place a number of specific protections for PAYG customers (see Section 2.3.2).

There are two different ways in which a PAYG solution can be installed in electricity (and just one in gas).

### **2.3.1 Non-smart PAYG solution set ups**

In the gas market, a PAYG meter is always installed as a replacement for the credit (bill pay) meter. Gas Networks Ireland is responsible for these meters and so they carry out the installation of the replacement meter. The PAYG meter will usually be in the same location as the original credit meter, and so this could be outside the customer’s property. As a result, some homes (in particular flats) cannot have PAYG gas because the meter is in an unsuitable location (e.g. in a locked intake room), and the customer would not be able to get access to the meter to apply top ups.

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<sup>6</sup> This includes both supplier provided lifestyle choice and network provided financial hardship PAYG meters.

The electricity market has evolved differently, with the introduction of a proposition focused specifically on “Lifestyle “ customers who want more control over their energy usage, but who are not in financial hardship, and so don’t qualify to have the installation costs of an ESB Networks meter socialised.

In electricity, two types of installation are possible:

1. **Replacement of the original credit meter** – in the same way as gas PAYG meters are installed. This installation is carried out by ESB Networks.
2. **Installation of an additional measuring device in series with the existing meter** – the existing regulated meter of record remains (and will still be read by ESB Networks), and an extra measuring device is added just inside the customer’s home (in series with the meter of record). These downstream devices are often referred to as Budget Controllers, as they are not replacing the main meter, which is still used for industry (settlement) purposes. In addition to the Budget Controller, the customer is often given a keypad, which the customer can use instead of interacting with the Budget Controller directly to top up. This type of installation is not carried out by ESB Networks, because the equipment is installed on the customer’s side of the ESB Networks meter.

The type of meter installation in electricity is determined by customer type – customers who have demonstrated financial hardship, and who are unable to pay their bill would be offered the first option. These customers would not need to pay for their installation of their PAYG meter. Once installed, the PAYG meter remains on the premises, but can be switched to credit mode. Customers who simply wish to use PAYG as a budgeting tool would be offered the latter – these customers are often referred to as Lifestyle PAYG customers, and the cost of the installation of their Budget Controller would not be socialised to all suppliers via the network charge.

Suppliers are not required to offer Lifestyle PAYG, and not all suppliers offer this service. However, all suppliers are required to offer financial hardship PAYG (as described in point 1 above).

### **2.3.2 The regulation of non-smart PAYG**

Given the possibility for automatic disconnection, and because PAYG has different features to Bill Pay, there are additional regulatory protections for PAYG customers. These provisions were originally designed for customers who are offered PAYG for reasons of financial hardship, but have since been adapted for Budget Controller/Lifestyle choice PAYG customers as well. In summary, the current regulations mean that:

- PAYG electricity customers cannot automatically disconnect overnight, on certain Public Holidays or at the weekends (electricity only) – these periods of time are known as Friendly Credit Periods;
- PAYG customers will always be offered a minimum of €5 Emergency Credit if they run out of credit;
- Suppliers must obtain consent before the installation of a PAYG meter (from both the customer and landlord) and must assess the suitability of PAYG for that customer. The cost of the PAYG installation may only be socialised where a customer is in genuine financial hardship;
- When installing a PAYG meter for a debt customer (as a last resort pre-disconnection) suppliers must take account of the customer's ability to pay, explain instalments/debt recovery timeline and ensure the customer has access to top up;
- Customers with outstanding debt must be provided with a debt statement 3 times a year, and a maximum of 25% of each vend can be assigned to debt repayment. These customers must also be told how to access information on their debt, how they will be informed when it has been paid off, and what the supplier's policy on charging debt balances is (e.g. on Change of Supplier);
- If the customer has difficulty using a PAYG meter, Budget Controller or topping up at any point, then the supplier must offer the customer alternatives;
- Suppliers are required to advise both the customer and ESB Networks if they believe that a Budget Controller is not accurately reflecting the customer's usage and large debts are accruing<sup>7</sup>;
- Suppliers must ensure that any additional charges applied in relation to a particular payment method (e.g. PAYG) are cost reflective; and
- Suppliers are required to publish a (CER approved) PAYG Code of Practice, which sets out, for customers:
  - a) How PAYG operates (including the difference between Budget Controllers and meters) and how to obtain more information (e.g. on tariff/charges and vending facilities), including a telephone number that the customer can call for advice on PAYG;

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<sup>7</sup> Note that the ESNB installed credit meter will continue to be used for settlement and network billing purposes.

- b) The frequency and content of statements that the customer can expect (which must be at least annual and include consumption and payments);
- c) Details on how to access information on local vending facilities, and the impact of topping up at an unapproved vending facility;
- d) Any charges that the customer may incur for lost top up cards;
- e) How much Emergency Credit is available to the customer and how they can access and repay this;
- f) The supplier's policy on refunding credit balances (which must take less than 2 months from the Change of Supplier, or as approved by the CER);
- g) A statement highlighting that the CER has put in place a rule that vulnerable customers cannot be disconnected in the winter months, but that if customers choose electricity PAYG this rule will not apply to them, and where they choose gas PAYG vulnerable customers need to select an option to prevent the meter from disconnecting during the winter months; and
- h) A statement highlighting that Budget Controllers may not be suitable for vulnerable customers.

These regulations are set out in the Supply Licence, the Supplier Handbook and Working Practices.

As part of this phase of work, the CER is considering whether these provisions remain appropriate for smart PAYG.

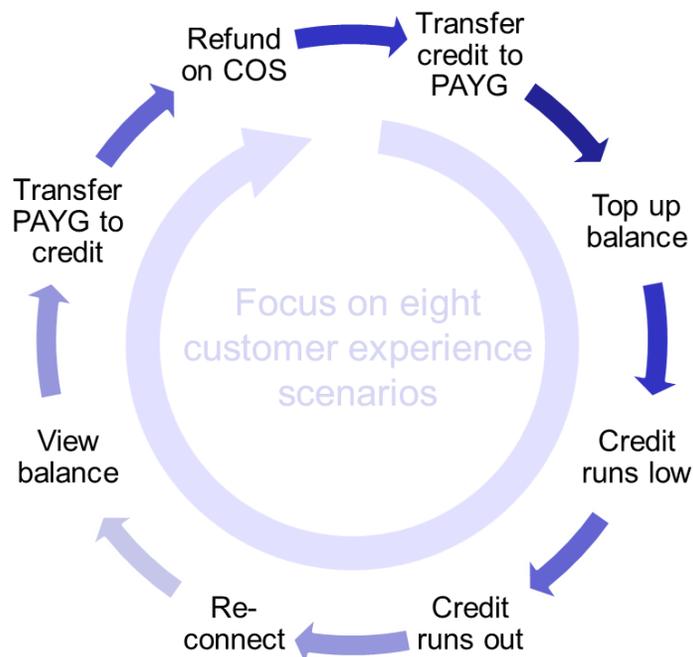
The CER notes that the move to smart meters is being undertaken in the context of an evolving market, and that the existing lifestyle choice PAYG arrangements are currently under review.



## 3.0 Considerations for detailed PAYG Policy Design

### 3.1 Summary

During the high level design phase, eight key customer experience scenarios for PAYG were identified.



In this section, we will revisit each of these scenarios to consider if further detail, over and above that was included in the October 2014 Decision is required, and if so, what range of detailed design options might be sensibly considered:

- Transfer credit to PAYG is covered in sub-section 3.2;
- Top up balance is covered in sub-section 3.3;
- Credit runs low is covered in sub-section 3.4;
- Credit runs out (disconnect) is covered in sub-section 3.5;
- Reconnect is covered in sub-section 3.6;
- View Balance is covered in sub-section 3.7;
- Transfer PAYG to credit is covered in sub-section 3.8; and

- Refund on Change of Supplier (COS) is covered in sub-section 3.9;

In five of the above scenarios, (top up balance, credit runs low, credit runs out, reconnect and view balance) the CER is of the view that additional detail on the minimum customer experience that should be expected for smart PAYG customers is needed. In the other three areas the CER considers that the high level design may provide enough clarity to allow the existing regulatory tools to be adapted using only minor refinements, given that there is limited change to the customer experience in these scenarios.

For the lower change scenarios, in this section, we explain our rationale for proposing only limited changes to the regulatory framework and explain, at a high level, the changes that might be required. We then seek your views on this assessment.

For the five customer experience scenarios that may require greater change, we set out the:

- Rationale for further consideration of this area;
- Range of detailed design policy frameworks that could reasonably be implemented in line with the high level design. This is drawn out using a number of examples at points along a scale of regulatory options, from light touch frameworks, through to policy frameworks that are more prescriptive; and
- A description of the features of each example, drawing out factors that appear relevant to assessing and commenting on their relative merits.

A number of consultation questions have been included to ascertain your views on the range of examples in each of these scenarios and other important design points for each scenario.

For clarity, each sub-section starts with a summary of the non-smart customer experience and the element of the October Decision on which the detailed policy design will be based.

At the end of this section, we take a broad view, looking at smart PAYG as a whole, to consider whether any additional scenarios need to be considered during this phase of work.

The CER notes that each of the customer experience scenarios described above are highly interconnected with the other scenarios, and that this applies to the detailed policy framework development as well. For example, if customers were guaranteed to receive a number of detailed warnings over several days to highlight that their credit was running low and that they need to top up (potentially

alongside information on how to reduce their usage and where they can top up), then this might reduce the need for additional, more detailed policy requirements around automatic disconnection.

However, for clarity, in this paper we have kept the discussion of each customer experience scenario separate. The interactions between the policies for each of the customer experience scenarios is something that the CER plans to consider later this year.

### 3.1.1 Rationale for non-smart comparison

We note that in each sub-section below we refer to the non-smart customer experience. The CER considers that comparison with the current arrangements is appropriate, given that a number of customers already have non-smart PAYG meters.

## 3.2 Transfer Credit to PAYG

### 3.2.1 Current (non-smart) customer experience of transfer

Scenario	Customer Experience	
	Electricity	Gas
<b>Becoming a PAYG customer</b>	The customer will need to arrange for a new meter to be installed by ESB Networks or a Budget Controller to be installed by the Supplier in their property, once this is complete the customer can become a PAYG customer	As for electricity, but the meter will always be installed by Gas Networks Ireland

### 3.2.2 October 2014 Decision

Decision area	Decision text
<b>Becoming a PAYG Customer</b>	<p>When Becoming a PAYG customer:</p> <ul style="list-style-type: none"> <li>Seamless switching between payment modes will be supported to promote customer mobility and supplier innovation.</li> <li>A new customer account can be setup as PAYG for</li> </ul>

	<p>gas and / or electricity supplies.</p> <ul style="list-style-type: none"> <li>• Suppliers will not be required to remotely interact with the meter when setting up a PAYG customer for the first time.</li> <li>• Credit and debt balance information will be held by suppliers.</li> </ul>
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### 3.2.3 Rationale for limited change to existing policy

A smart meter will mean that customers no longer require an additional or new meter to be installed when they want to start paying for their energy in advance via a PAYG tariff. Instead, the supplier will simply change the account set up in their billing system. The supplier will then use the daily smart meter reads that they receive to calculate the customer's credit balance.

This approach will mean that suppliers are able to transition customers to PAYG more quickly, and without having to visit the premises.

### 3.2.4 Initial assessment of change required

For smart PAYG, in relation to the transfer from credit to PAYG, many of the existing protections for customers appear, under initial assessment, to cope well under this change, with relatively minor changes:

Existing regulation	Possible changes required
Consent before installation of the PAYG meter from the customer and landlord	<p>Landlord consent may only be required if the customer and supplier choose to install additional equipment on site</p> <p>Customer consent to move to PAYG would still always be required (potentially no change)</p>
Assessment of the suitability of PAYG for the customer	Some change to account for new communication channels (and see additional considerations section below)
Where there is an existing debt, taking account of the customer's ability to pay, explaining instalments/debt recovery timeline and ensuring that customer has access to top up	Potentially no change
Advising both the customer and ESB	Potentially no change (if a Budget

Networks if they believe that a Budget Controller is not accurately reflecting the customers usage and large debts are accruing	Controller is installed – see additional considerations below)
Additional charges applied in relation to a particular payment method (e.g. PAYG) are cost reflective	Potentially no change
Suppliers are also required to publish a PAYG Code of Practice, which sets out, for domestic customers: <ul style="list-style-type: none"> <li>a) How PAYG operates and how to obtain more information (e.g. on tariff/charges and vending facilities);</li> <li>c) Any charges that the customer may incur for lost top up cards;</li> <li>d) How much Emergency Credit is available to the customer and how they can access and repay this</li> </ul>	Some change required to the regulatory framework, and changes would be needed to suppliers Codes of Practice

**Q1.** Do you agree with the above assessment? Please provide rationale.

### 3.2.5 Additional considerations

#### 3.2.5.1 Customers with an existing budget controller

A number of customers already have PAYG. Where this is controlled via the main meter, this will be replaced as part of the smart meter rollout and the customer will transition to smart PAYG.

Where the customer has a Budget Controller (electricity only), this would not be the focus of the smart installation which will replace the (ESBN installed) electricity meter (although, where the Budget Controller remains in use, it would be subject to the requirements in the Supplier Handbook).

**Q2.** Respondents are invited to provide their views on the interaction between smart PAYG and Budget Controllers as part of the transition to smart PAYG, both from an individual customer perspective and more broadly, in relation to market interactions.

### 3.3 Top Up Balance

#### 3.3.1 Current (non-smart) customer experience of topping up

Scenario	Customer Experience	
	Electricity	Gas
<b>Topping up your balance</b>	<p>Customers can usually top up using cash at local shops or using cards to top up online or over the phone. The exact channels available vary by supplier.</p> <p>When the customer tops up, they are given a numeric code which they need to add to the electricity meter or Budget Controller in order to access the credit</p>	<p>As for electricity, except instead of being given a code to input, the code is recorded on a card and the customer needs to put the card into the meter in order to access the credit</p>

#### 3.3.2 October 2014 Decision

Decision area	Decision text
<b>Topping up your Credit Balance</b>	<p>When Topping up your Credit Balance</p> <ul style="list-style-type: none"> <li>• Payments will be processed centrally (back office systems) without interaction with the meter.</li> <li>• Retail point of sale transactions shall be credited to customer credit balance subject to SLA's (this is expected to be near real-time).</li> </ul>

#### 3.3.3 Rationale for additional policy detail

While Smart PAYG will create an opportunity for greater innovation in relation to purchasing top ups, it will not fundamentally change the existing customer experience of buying a top up, as this transaction remains between the supplier (or their agent) and the customer.

The smart PAYG solution will however, change how the credit that the customer has bought is made available to them. Instead of the customer being responsible for applying the credit directly to the meter (either via a numeric code or by placing a card in the meter) the supplier will be responsible for adding the credit

to the customer account in their systems. The meter no longer holds the credit balance – this is held in the supplier’s system instead.

During this phase of work, it will be important to identify:

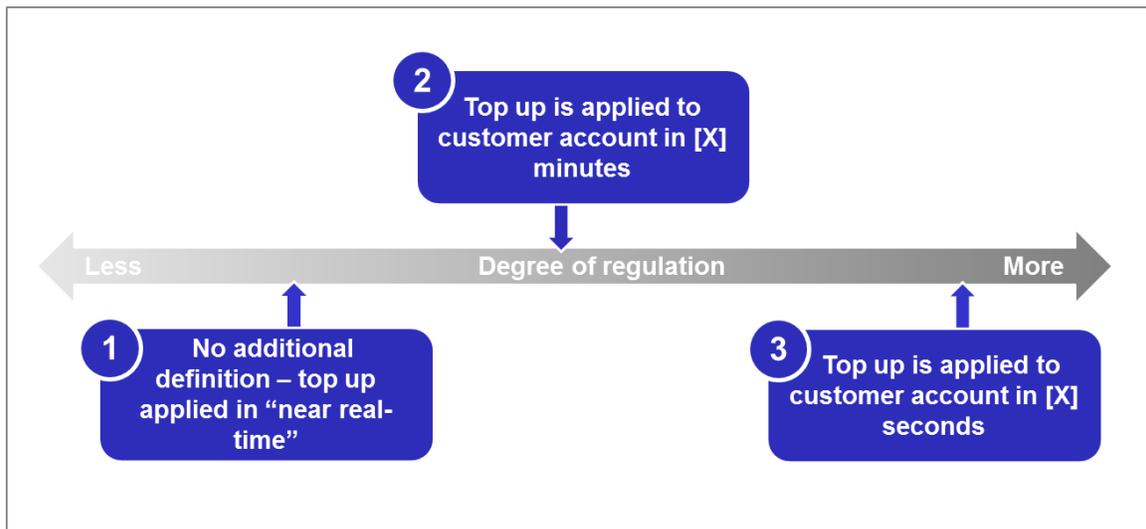
- How quickly the customer can expect the credit that they have bought to be added to their account and how quickly this is notified to them.

The time taken to update the supplier system is not of great importance to the customer under the current arrangements, however, it will become particularly important for customers who either have very low credit or have already automatically disconnected, as having a fully up to date balance can prevent or shorten a disconnection. As a result, the CER considers the time taken to update the customer’s account balance after a top up to be key to the customer experience.

The October Decision left a relatively narrow range of options available, in that it defined that the updates should be credited to the customer account in near real-time.

### 3.3.4 Range of detailed design policy frameworks

To illustrate the range of possible policy frameworks, which would be consistent with the October Decision, we have picked a number of examples, or points on this spectrum.



#### ***Example 1: No additional definition of “near real-time”***

A relatively light touch regulatory environment might allow suppliers to determine what “near real-time” means, with no definition of the time that the top up must be applied to the account by.

This type of regulation would be put in place on the understanding that the balance would be updated quickly, but there would be limited regulatory guarantee that this would happen.

### ***Example 2: Update applied in minutes***

Moving towards a prescriptive framework, suppliers could be required to apply credit to the customer's account in a number of minutes (e.g. 15 minutes).

### ***Example 3: Update applied in seconds***

A more prescriptive framework might require suppliers to update the customer's account balance within a number of seconds of the transaction being confirmed (e.g. 60 seconds), dependent on the technical ability to do this.

Under this example, it may be appropriate to vary the time allowed to apply the credit to the customer's account based on the channel that the customer used to top up.

**Q3.** Do you think that this range accurately depicts the range of *possible* detailed policy designs in this area that are consistent with the high level design? If no, please explain why.

### **3.3.5 Initial assessment of examples**

<b>Example Policy Designs</b>	<b>Possible Impacts</b>
<b>1: No additional definition of “near real-time”</b>	The regulatory framework would be focused on providing flexibility to suppliers in how quickly they need to update the customer balance on their systems, this would leave some ambiguity in the customer experience, with the possibility of different suppliers defining “near real-time” in different ways.
<b>2: Update applied in minutes</b>	This regulatory framework would most closely match the current customer experience, in the (very different) smart PAYG environment by adding the credit to the customers balance quickly (albeit to the customers balance in the supplier system rather than on the meter). This would be one way of ensuring that reconnection decisions could be made within minutes of the top up being purchased (see Section 3.6 for further details on reconnection).
<b>3: Update applied in</b>	The regulatory framework would be focused on

<b>seconds</b>	<p>ensuring customers’ accounts are updated as quickly as possible with credit that they have bought and improving the customer experience when they wish to know their balance shortly after buying credit, and facilitating fast reconnections.</p> <p>We note that this example may be technically challenging.</p>
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**Q4.** Respondents are invited to provide their views on these examples.

### 3.4 Credit runs low

#### 3.4.1 Current (non-smart) customer experience

Scenario	Customer Experience	
	Electricity	Gas
<b>Credit runs low</b>	When the credit remaining on the meter gets low (a few Euros) the meter will emit an audible beeping noise	As for electricity

#### 3.4.2 October 2014 Decision

Decision area	Decision text
<b>How you are Alerted when your Credit is Running Low</b>	<p>Decisions relating to How you are Alerted when your Credit is Running Low:</p> <ul style="list-style-type: none"> <li>• A PAYG customer shall be alerted when credit falls below agreed credit thresholds.                             <ul style="list-style-type: none"> <li>○ Minimum threshold level(s) will be agreed as part of the next phase of the programme.</li> </ul> </li> </ul>

In addition to the decision noted above the paper provided the following illustration of how multiple alerts could be structured:

- **Level 1** – agreed between the supplier and customer

- **Level 2** – when the customer’s credit balance is below the minimum threshold<sup>8</sup>
- **Level 3** – when the customer’s credit balance is at or below zero

### 3.4.3 Rationale for additional policy detail

Smart meters will make a much more sophisticated system of alerts possible in both electricity and gas, and these have the potential to dramatically improve the customer experience – which currently relies on the customer being at home, and hearing their meter (which may be in a relatively inaccessible location) beep to indicate low credit.

The October Decision went some way towards securing the potential improvements for customers; however, consideration still needs to be given to the finer detail of what the customer should be able to expect as a minimum level of service. In this context, the detailed design of the regulatory framework could determine some or all of the following parameters:

- a) The number of alerts that the customer should receive as their credit runs down;
- b) When the alerts should be sent to the customer and the channel that they are sent via;
- c) The credit level at which alerts are sent (threshold);
- d) The data used to generate the alert (e.g. actual meter read); and
- e) The information contained within each alert (for example, this might include the credit level when the alert was generated, the time that it was generated, whether the credit balance has been calculated on actual or estimated data and how long the balance might be expected to last if the customer maintains their “normal” usage).

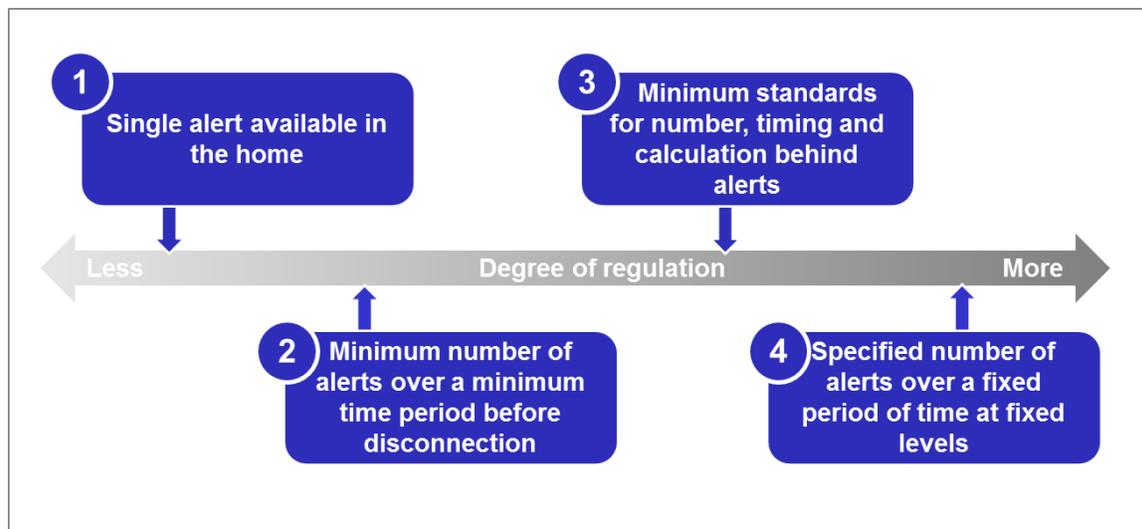
**Q5.** Do you agree that further policy detail is required in respect of how the minimum alert levels are set? Please provide rationale.

### 3.4.4 Range of detailed design policy frameworks

To illustrate the range of possible policy frameworks, which would be consistent with the October Decision, we have picked a number of examples, or points on this spectrum.

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<sup>8</sup> Minimum threshold and nature of alert to be agreed at a later stage in the programme



### ***Example 1: Single alert required (available in the home)***

A relatively light touch regulatory environment might simply require suppliers to provide the customer with a low balance alert within the home as a minimum. This example would closely match the current PAYG alert experience.

Only one alert might be required (as a minimum), and the level may or may not be customisable.

This example is therefore covering (a) and (b) from the list above.

### ***Example 2: Minimum number of alerts over a minimum time period***

A slightly more prescriptive framework might require suppliers to meet minimum alert standards for all customers – for example providing a minimum number of alerts over a minimum time period. For example, three alerts over a minimum of three days before an automatic disconnect could be issued (taking into account any other customer protection requirements, such as friendly credit periods).

Under this example, the supplier would determine the precise alert levels, channels and content. This example is therefore covering (a) and (b) from the list above.

### ***Example 3: Minimum alert standards***

Moving towards a more prescriptive framework, suppliers could be required to meet minimum standards for alerts that include:

1. The minimum number of alerts;
2. The minimum time period that they can be sent over (e.g. 3 days); and

3. A requirement for alert to be calculated using a meter read that is no more than [X] hours old (e.g. 2)<sup>9</sup>, and all top ups bought by the customer more than [X] minutes ago (e.g. 15).

This example is therefore covering (a), (b) and (d) from the list above.

#### **Example 4: Set number of alerts over a set time period**

In a prescriptive regulatory framework, there could be detailed requirements on suppliers in relation to the number of alerts, when they must be sent (e.g. time of day/spacing), channel they are sent via, the credit level at which they are sent and the information contained within them.

This example is therefore covering all of the points (a) to (e) from the list above.

**Q6.** Do you think that this range accurately depicts the range of *possible* detailed policy designs in this area that are consistent with the high level design? If no, please explain why.

### **3.4.5 Initial assessment of examples**

Example Policy Designs	Possible Impacts
<b>1: Single alert required (available in the home)</b>	The regulatory framework would be focused on retaining the current experience as a minimum, and indicate a willingness to place weight on competition to improve the flow of information to PAYG customers (of which alerts form one part) over and above this.
<b>2: Minimum number of alerts over a minimum time period</b>	The regulatory framework would focus on securing some improvement to the current customer experience, setting a new minimum expectation, whilst retaining a role for market innovation and choice for customers.
<b>3: Minimum alert standards</b>	The regulatory framework would be seeking to create a degree of change in the minimum standards for the accuracy of the alert that customers can expect; in addition to defining requirements on the timing and number of alerts sent, based on the new standards that become

<sup>9</sup> Given that the core design requires one data collection from the meter per day, this type of requirement implies that the supplier would need to send the alert to the customer within two hours of the meter being read.

	possible with smart PAYG.
<b>4: Set number of alerts over a set time period</b>	The regulatory framework would be focused on ensuring a consistently high, and standardised, experience for PAYG customer that makes effective use of the available data and communication options available is guaranteed.

**Q7.** Respondents are invited to provide their views on these examples.

### 3.4.6 Additional considerations

#### 3.4.6.1 Receiving alerts

New, and more contemporary alert channels (e.g. text message or push app alerts) will mean that customers are able to customise their experience and receive updates outside the home. However, new channels also increase the chance of a customer missing an alert (e.g. if they change their mobile number without advising the supplier).

**Q8.** Do you consider that this is a significant enough issue to require additional regulatory provisions to minimise the possibility of a customer missing an alert?

## 3.5 Credit runs out

### 3.5.1 Current (non-smart) customer experience

Scenario	Customer Experience	
	Electricity	Gas
<b>Credit runs out</b>	<p>When credit runs out the meter will automatically disconnect. The customer has the option to use their Emergency Credit (currently set at €5) to temporarily reconnect the supply until they can top up.</p> <p>If credit runs out during the night or at the weekend (and on specific Public Holidays), then the customer will not be</p>	As for electricity, but without friendly credit periods

	disconnected until the next weekday morning.	
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### 3.5.2 October 2014 Decision

Decision area	Decision text
<b>When your Credit Runs Out</b>	<p>When your Credit Runs Out:</p> <ul style="list-style-type: none"> <li>• Customers are alerted when their credit balance is at or below zero;</li> <li>• Customers who do not top-up with sufficient credit will be disconnected or remain disconnected; and</li> <li>• Disconnection will remain in line with existing policy<sup>10</sup>.</li> </ul>

### 3.5.3 Rationale for additional policy detail

“Self” disconnection is a key element of the current PAYG proposition for customers, as if the customer doesn’t top up, the meter will automatically disconnect. It offers protection to suppliers (in that it prevents customers building up debts that they cannot pay), and for customers, in that they are not able to build up debt that they do not have the means to pay off.

However, being without gas or electricity (even for a short period) is a significant event for a customer, particularly over the winter months. As a result, PAYG will never be suitable for some (vulnerable) customers and the CER is keen ensure that customers who find themselves in this position remain adequately protected as we transition to smart PAYG.

The October Decision, goes some way to define the new standards required to protect customers, but leaves a number of policy options open in relation to:

- What steps the supplier must take before they can be sure that the customer’s credit balance is at or below zero (given that the supplier receives the consumption data once per day, with a short lag); and
- How the existing disconnections policies should be applied to smart PAYG (see section 3.5.6.1).

These are important considerations, because for smart PAYG, the meter will not hold the customer’s credit balance, and so the meter itself will not be able to

<sup>10</sup> See Section 2.3.2 of this paper for details of the current regulatory requirements for PAYG. The existing disconnection policy will be reviewed to make it appropriate to smart technology, but the key features of the current protections (which derive from legislation) will be maintained.

determine when the customer has reached zero credit (and hence the meter will not automatically disconnect). Instead, the supplier, using the credit balance held within their systems will determine when the customer has reached zero credit. The supplier will trigger an automatic disconnect by sending a message via the smart communications network (managed by Networks) to the meter.

To calculate the customer's credit balance, the supplier will need to combine the:

- Value(s) of the most recent top up(s); and
- The last meter reading (showing how much energy was used in the previous day) received from ESB Networks or GNI.

This will give a point in time credit balance. To obtain a real-time balance, the supplier would also need to consider the customer's electricity or gas usage since the meter reading was taken.

Given that, smart meters will allow current credit balance to be calculated in different ways. For example, how recently the meter reading was taken, or whether recent top ups have been included in the balance and whether the consumption since the last meter reading is estimated will all impact the credit balance calculated.

The way in which the supplier makes this calculation has the potential to impact the customer experience because credit balance will determine whether an automatic disconnect or low balance alert message needs to be sent. As a result, the CER considers further detail to be required in relation to the customer protections in place for this scenario.

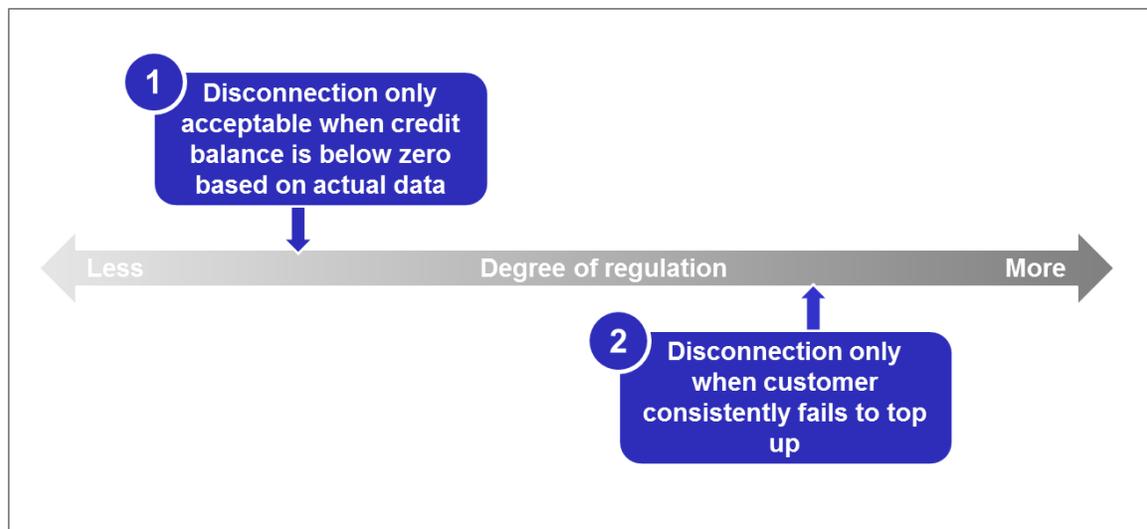
**Q9.** Do you agree that further policy detail is required in relation to the minimum provisions for customers as their credit runs out? Please provide rationale.

### **3.5.4 Range of detailed design policy frameworks**

To illustrate the range of possible policy frameworks, which would be consistent with the October Decision, we have picked a number of examples, or points on this spectrum.

The CER notes, that neither of the examples described below provides for the supplier to disconnect the customer on the basis of estimates, or before their balance reaches zero (e.g. by requiring the customer to have a credit buffer).

The CER is of the view that these options have already been ruled out by the high level design, which states that the customer will only be disconnected when their credit is at or below zero (see Section 3.5.2).



***Example 1: Disconnection only when below zero (based on actuals)***

One possible regulatory environment might require suppliers to use actual data to determine the credit balance before they could issue an automatic disconnect. This would mean that it would only be possible for the supplier to make the disconnection decision once per day (when they receive the previous days meter reading).

Under this example, customers would effectively have a time “buffer” (up to 1 day) after they reach zero credit and before disconnection, and would be accruing debt in this time, in a similar way to the way that emergency and friendly credit is used in the current arrangements.

***Example 2: Disconnection only when customer consistently fails to top up***

A regime that sought to minimise PAYG disconnections further might require suppliers to not only confirm that the balance is below zero, but also to demonstrate that a customer has been given (and missed) several opportunities to top up. For example, a disconnect could only be sent [X] days (e.g. 2) after the balance went below zero and after [X] communications (e.g. 3) had been sent to the customer advising them that they need to top up to prevent disconnection.

*Note that these messages could be over and above the alerts described in Section 3.4.*

**Q10.** Do you think that this range accurately depicts the range of *possible* detailed policy designs in this area that are consistent with the high level design? If no, please explain why.

### 3.5.5 Initial assessment of the examples

Example Policy Designs	Possible Impacts
<b>1: Disconnection only when below zero (based on actuals)</b>	The regulatory framework would be seeking to match the existing PAYG customer experience, disconnecting only when customers have run out of credit, and slightly beyond this. This approach might be thought of as a time based version of emergency credit.
<b>2: Disconnection only when customer consistently fail to top up</b>	The regulatory framework would be focused on absolutely minimising disconnections for PAYG customers. This model would go beyond the current protections for PAYG customers, and would assume that some level of debt is always preferable to a disconnection.

**Q11.** Respondents are invited to provide their views on these examples.

### 3.5.6 Additional considerations

#### 3.5.6.1 Emergency and friendly credit

The existing regulations for PAYG require suppliers to offer customers a minimum of €5 Emergency Credit that they can use if their credit runs out unexpectedly. In addition, electricity customers benefit from Friendly Credit periods so that they are not disconnected overnight, at the weekend or on certain Public Holidays.

Smart meters provide an opportunity to extend Friendly Credit periods in gas as well.

**Q12.** Do you believe that these provisions – emergency credit and friendly credit periods should remain in place for smart PAYG?

**Q13.** Should friendly credit provisions be extended to cover gas?

#### 3.5.6.2 Updating the credit balance held in supplier's systems

The smart PAYG design means that suppliers will be responsible for calculating PAYG customer's credit balances for the first time, and that this will be the information informing decisions by suppliers to send messages to disconnect and reconnect meters for PAYG customers.

To calculate the customer's balance accurately at least once per day, the supplier will need to know when the customer last topped up, and how much they

topped up by. Under the current model, suppliers do not need to receive this information in a timely manner, as customers can apply the top up themselves.

As a result, the time that the supplier takes to apply top ups and meter reads to the customer account will dictate how up to date the information available to the customer will be.

The time that suppliers take to apply top ups is covered in Section 3.3.

The time that suppliers take to apply meter reads is only partly under the supplier's control, as they will receive this information from the Network. It may therefore be appropriate (particularly if a framework similar to Example 1 were selected) to place requirements on both the Network (to deliver the meter read to the supplier) and on the Supplier (to apply the read to the customer's account and recalculate the balance).

**Q14.** Do you think that a requirement should be considered for the length of time that it takes the network to deliver the daily meter read?

**Q15.** Do you think that a requirement should be considered for the length of time that it takes the supplier to apply the meter read to the customers balance?

### **3.5.6.3 Treatment of specific customer groups**

For many customers, not having to physically interact with the meter to apply a top up will be beneficial, particularly where the meter is outside, or in a less accessible location. However, the CER notes that some customers may have additional needs in relation to topping up in order to minimise the risk that they run out of credit:

- Top up channels that facilitate the use of cash (as opposed to cards) may be required as not all customers will have bank accounts;
- Small minimum transaction/top up amounts may be required as customers may have limited funds at any given time (topping up more frequently); and
- A third party may need to buy a top up on the customer's behalf (e.g. when the customer is incapacitated).

**Q16.** Do you consider that some customers may have additional requirements for topping up? And if so, should the regulatory framework make provision for this? Please provide rationale.

### 3.6 Reconnecting your Supply

#### 3.6.1 Current (non-smart) customer experience

Scenario	Customer Experience	
	Electricity	Gas
<b>Reconnecting your supply</b>	When the customer has bought a top up they need to apply this credit directly to the meter (or using a keypad if they have one). This will normally involve typing a code into the meter. Once the code is inputted correctly the supply will immediately reconnect	As for electricity, except that a card is placed in the meter instead of using a code. The customer will then need to press an additional button on the meter to confirm that it is safe to reconnect the supply.

#### 3.6.2 October 2014 Decision

Decision area	Decision text
<b>Reconnecting your Supply</b>	When Reconnecting your Supply: A customer must be reconnected when they apply credit <sup>11</sup> The reconnection must occur within specified SLA's to be agreed at a later stage in the programme

#### 3.6.3 Rationale for additional policy detail

Following an automatic disconnection, a PAYG customer can reconnect their supply by purchasing more energy, via a top up. (Non-smart) PAYG customers purchase the top up as normal and add the credit to the meter. The supply reconnects as soon as the customer applies the credit to the meter.

If the customer has dipped below zero credit (e.g. because the credit ran out during a friendly credit period and so the disconnection didn't happen until the next morning), then the customer will need to add enough credit to get above zero before the supply reconnects.

<sup>11</sup> Minimum top up amount to be determined.

The customer has control of how quickly the reconnection happens, in that they can choose when to apply the credit to the meter.

The October Decision could represent a change to the customer experience of reconnection. For smart PAYG customers the supplier will add the top up to the customer's account and calculate the new credit balance. The supplier would then send a reconnect message to the meter. However, the October Decision in this area leaves a number of key policy design questions open in relation to:

- How quickly the customer can expect to be reconnected when they have applied credit; and
- How the supplier decides whether the credit bought by the customer is enough to trigger a reconnect.

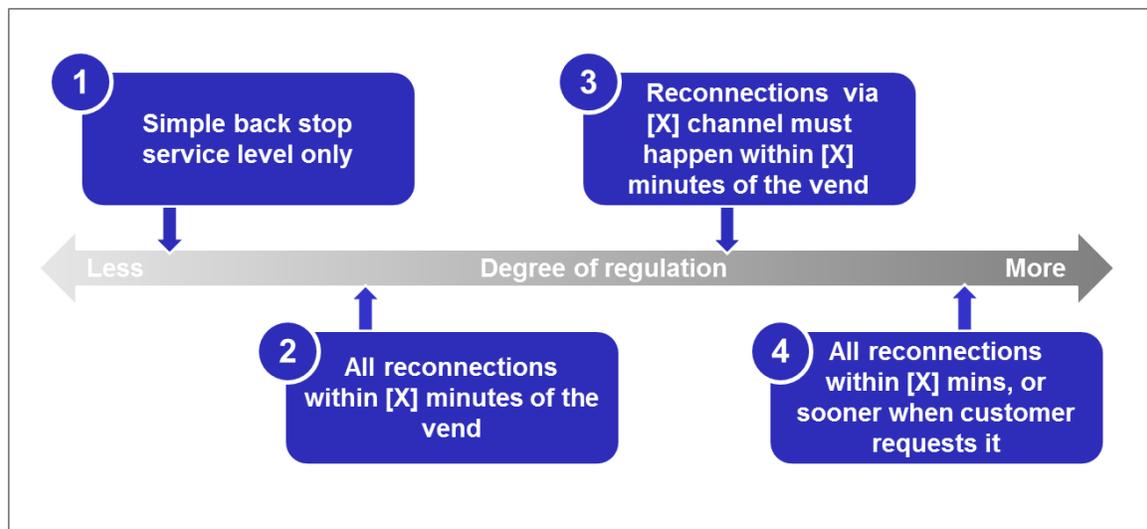
These are important considerations because reconnecting customers quickly when they pay is a key mitigating factor in the use of self-disconnection in the current PAYG model, and this has the potential to be altered substantially in the smart PAYG solution. As a result, the CER considers further detail to be required in relation to the customer protections in place for this scenario.

We note that any reconnect will require action by both the supplier and network (the supplier will make the reconnect decision and send a request to the network, which will then send the message to the meter). As a result, any requirement would potentially need to be broken down into separate elements; however, at this stage, the CER is keen to focus on the customer experience, which covers both elements together.

**Q17.** Do you agree that further policy detail is required in relation to the minimum provisions for how quickly PAYG customers are reconnected? Please provide rationale.

### **3.6.4 Range of policy frameworks**

To illustrate the range of possible policy frameworks, which would be consistent with the October Decision, we have picked a number of examples, or points on this spectrum for how quickly a customer can expect to be reconnected.



### ***Example 1: Backstop service level***

A relatively light touch regulatory environment might simply provide for a backstop service level (e.g. within 3 hours of the vend being made).

This type of regulation would be put in place on the understanding that most customers would be connected much more quickly, but there would be no regulatory guarantee that this would happen

### ***Example 2: All reconnections within [X] mins***

A more prescriptive framework would be to require all reconnections to be made within [X] (e.g.15) minutes of the vend being made.

### ***Example 3: Reconnections within in [X] mins, channel specific***

Example 2 could be slightly adapted to make the requirement channel specific – so for example a top up that is bought online might lead to a faster reconnection than one bought in a shop. This might be considered beneficial if payments made via some channels were intrinsically more time consuming to process than others.

### ***Example 4: Reconnections within [X] minutes or customer driven***

A more detailed regulatory framework might require all reconnections to happen within [X] minutes (as for Example 2), but then go one step further and require that the customer is able to speed up this process.

Under this example, the customer would be able to trigger a much quicker reconnection (possibly on the proviso that they were able to meet certain criteria

e.g. where they can prove that they have made a vend of sufficient value to establish a positive balance).

**Q18.** Do you think that this range accurately depicts the range of *possible* detailed policy designs in this area that are consistent with the high level design? If no, please explain why.

### 3.6.5 Initial assessment of examples

Example Policy Designs	Possible Impacts
<b>1: Back stop service level</b>	The regulatory framework would be focused on allowing the market to drive customer experiences, creating differentiation in the reconnection experience between suppliers, and minimising the cost of the reconnection.
<b>2: All reconnections within [X] mins</b>	The regulatory framework would be focused on providing consistency for customers across top up channels and suppliers in terms of minimum experience that a customer can expect when they need to be reconnected.
<b>3: Reconnections within in [X] mins, channel specific</b>	As for (2), but in this instance the regulatory framework would be seeking to facilitate a quicker reconnection if it is technically possible, based on the payment channel used. This would allow for greater differentiation in supplier products, and in the customer experience, and would be focused on ensuring the fastest reconnection in all scenarios.
<b>4: Reconnections within [X] minutes or sooner when the customer requests it</b>	The regulatory framework would be focused on matching current customer experience in the smart environment as a minimum requirement, and retaining customers' ability to determine how quickly they want to be reconnected.

**Q19.** Respondents are invited to provide their views on these examples.

### 3.6.6 Additional considerations

#### 3.6.6.1 When to reconnect a customer

Calculating the customer's new credit balance and determining whether it is positive (and so the customer should be reconnected) will no longer be done on the meter.

This means that the existing method (where the customer's usage right up to the self-disconnect is known, and so the exact amount required for them to go back into credit is known) will not always work for smart PAYG.

Under smart PAYG, suppliers will determine whether to reconnect the customer, based on the information they have available to them – the amount of the customer's most recent top up(s) and the most recent meter read.

In considering when it is appropriate to reconnect a customer, this could be done in two fundamentally different ways:

1. When the top up amount is estimated to be enough to put the customer back in credit (i.e. estimating how much they have used since the last meter read); or
2. When the top up is above a pre-set or fixed amount (e.g. the customer is told when they disconnect how much they need to top up to be reconnected).

The October Decision noted that a decision on minimum top up amounts for reconnections would be made during this phase of work, but did not state whether this minimum amount would be based on a customer/reconnection specific estimation or a pre-set amount, which is based on the last read.

**Q20.** Do you agree that the question of how to calculate/estimate the top up amount required to reconnect should be considered further in this phase of work?

**Q21.** Which of the above methodologies do you consider preferable? Please explain your rationale.

### **3.6.6.2 Presence on site during a reconnection**

At present, all PAYG customers who self-disconnect have to be on site when reconnecting their supply because the meter requires a physical input (card or code). This is true for both electricity and gas customers, because they apply a credit by interacting directly with the meter.

The smart PAYG solution does not intrinsically require the same presence on site, because the supplier sends the reconnect message remotely.

However, current safety policy stipulates that there must be a customer presence at the Gas meter when Gas supplies are reconnected. In the October decision,

the CER noted that this requirement will remain, and will be reviewed by the CER Safety Team, alongside the future requirement for the remote reconnection of Electricity supplies in a later stage of the programme. This review is ongoing.

### 3.7 View Balance

#### 3.7.1 Current (non-smart) customer experience

Scenario	Customer Experience	
	Electricity	Gas
<b>Viewing your credit balance</b>	Customers can view their current credit balance on the meter, Budget Controller or keypad. Some keypads will also display an estimate of how long this credit might last	Customers can view the remaining credit on the meter

#### 3.7.2 October 2014 Decision

Decision area	Decision text
<b>Viewing your Credit Balance</b>	<p>When Viewing your Credit Balance:</p> <ul style="list-style-type: none"> <li>• Customers will be able to obtain their credit balance on demand. Channels may include (but are not limited to), SMS, web based, automated voice messaging etc.</li> <li>• Suppliers are responsible for providing their customers with an appropriate method of viewing their credit balance.</li> <li>• The credit balance will be held and maintained on supplier systems</li> <li>• The credit balance will be based on debits for energy charges calculated at least once per day and will be based on available actual meter readings.</li> <li>• Where credit balance is displayed to customers the message will indicate when the last energy charges were calculated.</li> </ul>

#### 3.7.3 Rationale for additional policy detail

At present, (non-smart) PAYG customers view their credit balance at any time on their meter (or keypad). Some customers can also view an estimate of the time left before their credit runs out. This credit balance is not available to the customer outside the home.

Smart PAYG meters will not hold the meter balance, instead this will be held within the supplier systems. Suppliers will update the credit balance each time the customer tops up and when they receive a meter read from the Network. As a result, the credit balance would not be available to the customer to view on their meter, and instead the customer would request their balance from the supplier.

The October Decision stipulates that the credit balance must be re-calculated on the basis of available actual meter readings at least once a day. It therefore contemplates the possibility of more frequent updates, if meter readings are available. The core design assumes that Networks will provide suppliers with meter readings just once per day. However, the data made available to consumers in the home is, potentially, another route through which meter readings could be made available to suppliers.

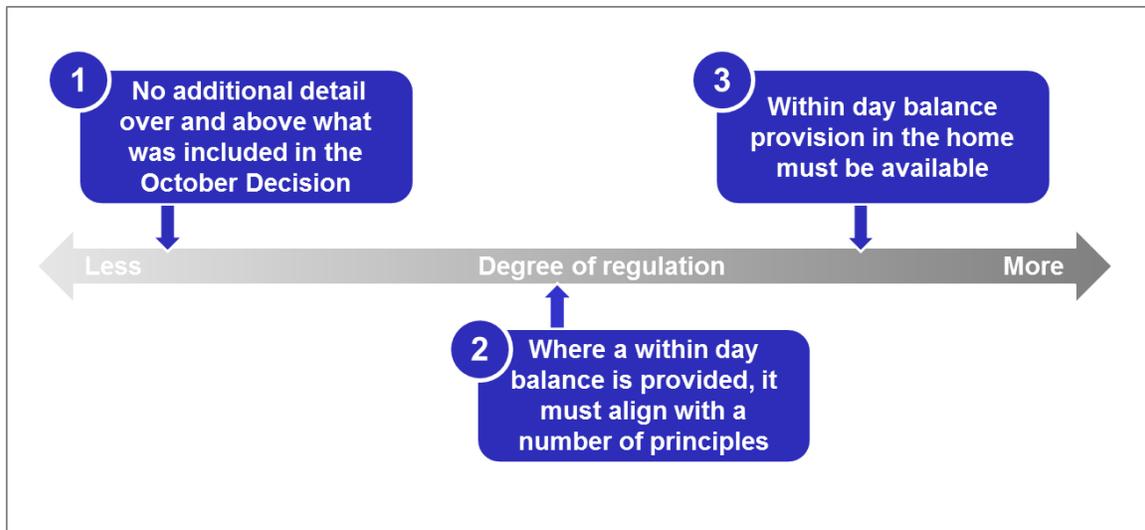
The October Decision will bring new opportunities for customer services, but represent a change to the customer experience, and leaves a number of detailed policy design questions open in relation to:

- What (if anything) the supplier should be obliged to do with a customer provided meter read, e.g. provide an indicative (un-validated) balance update; and
- Whether a supplier should be obliged to take active steps to enable customers to submit such information for the purpose of recalculating a credit balance.

These are important considerations, as they will directly impact the customer experience.

**Q22.** Do you agree that further policy detail is required in relation what the minimum provision of information is to customers when they request their credit balance? Please provide rationale.

### **3.7.4 Range of detailed design policy frameworks**



### **Example 1: No additional detail**

A relatively light touch regulatory environment might be to simply translate the October Decision into regulation and not provide any additional guidance on what it means to make a balance available to the customer on demand.

This would mean that suppliers could interpret the arrangements in a number of different ways, allowing for a fair degree of innovation and differentiation in what is provided to customers when they ask for their current balance.

### **Example 2: Principles for providing on demand balance**

A more prescriptive framework would be to require on demand balances that are provided to customers to comply with a number of principles, which might, for example, include a requirement to take into account a customer meter read if one is provided. Or if the customer does not provide a read, then suppliers would be required to state when the balance was calculated (e.g. when the supplier last checked for a meter read and top ups).

### **Example 3: On demand balance available in the home**

A more prescriptive framework would be to require suppliers to provide an on demand balance in the home<sup>12</sup>, as a minimum. In this example, the on demand balance could be derived using data from the meter (broadcast within the home via the HAN) to provide the consumption since the last meter read was taken and information from the supplier system (the last meter read and most recent top ups).

<sup>12</sup> For example, the supplier could provide this via an IHD or App connected to the HAN.

This model would provide something close to the current PAYG customer experience, although it is noted that, this is not bill quality data, due to data from the meter being provided pre-validation.

This example could be combined with example 2 to make provision for customers to obtain their balance outside the home as well.

**Q23.** Do you think that this range accurately depicts the range of *possible* detailed policy designs in this area that are consistent with the high level design? If no, please explain why.

### 3.7.5 Initial assessment of examples

Example Policy Designs	Possible Impacts
<b>1: No additional detail</b>	The regulatory framework would be focused on enabling suppliers to differentiate on what they offer customers when they ask for an on demand balance, and would indicate a willingness to rely on the market to develop the best approaches for providing customers with their balance.
<b>2: Principles for providing on demand balance</b>	The regulatory framework would be focused on setting minimum standards/clarity for customers on what they are receiving when they request their balance on demand whilst looking to the market to identify the best channels and information to give the customer.
<b>3: On demand balance available in the home</b>	<p>The regulatory framework would be focused on aiming to replicate, as closely as possible, the current (non-smart) PAYG customer experience, whereby they can view their balance within the home, and leaving it for the market to determine whether an on demand balance outside the home is something that customers would value.</p> <p>This approach might be favoured if it was considered that customers highly value the availability of an on demand balance within the home, and that a degree of potential inaccuracy in this information would not decrease its value to the customer.</p>

**Q24.** Respondents are invited to provide their views on these examples.

### 3.7.6 Additional considerations

#### 3.7.6.1 Treatment of customers in financial hardship

An on demand balance is likely to be of greater importance to some customers, in particular customers in financial hardship, who may spend a greater proportion of time with a very low credit balance.

A constant display of the on demand balance may be particularly helpful to support these customers in budgeting for their energy use. However, this should be considered in the context of much improved information flow for smart PAYG customers (including more tailored low balance alerts options as described in section 3.4).

**Q25.** Do you consider that the on demand balance will be more important for customers in financial hardship to have? And if so, should the regulatory framework make provision for this? Please provide rationale.

### 3.8 Transfer to Credit (from PAYG)

#### 3.8.1 Current (non-smart) customer experience

Scenario	Customer Experience	
	Electricity	Gas
<b>Transferring from PAYG to credit</b>	The customer needs to obtain a code from their supplier to switch the meter into credit mode. Once they have inputted this code into the meter then they can be a bill pay customer.	A site visit will be required

#### 3.8.2 October 2014 Decision

Decision area	Decision text
<b>Transferring from PAYG to Credit Payment Method</b>	When Transferring from PAYG to Credit Payment Method: <ul style="list-style-type: none"> <li>Customer credit balance information will be held in the suppliers back office systems (not on the meter).</li> <li>The supplier will arrange the effective time/date for the</li> </ul>

	<p>transition of payment mode with the customer.</p> <ul style="list-style-type: none"> <li>Suppliers will credit the customer account with any positive credit balance remaining from the PAYG payment mode.</li> </ul>
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### 3.8.3 Rationale for limited change to existing policy

Under the non-smart PAYG arrangements, electricity PAYG customers can become Bill Pay customers via a phone call to their supplier, and then interacting with the meter (where they would need to agree the new contract with their supplier and obtain a code to switch the meter mode on the phone call, and then input this code into the meter). This has an associated cost, in that the (more expensive) PAYG meter is then under-utilised.

Gas customers would require a site visit to switch between credit/Bill Pay and PAYG.

For smart PAYG customers, no meter code will be required, and the required changes can be made entirely in the supplier’s system.

Whilst this does represent a change to the customer experience, it is relatively minor (particularly in electricity), and is a clear improvement in the gas experience – a single phone call opposed to a phone call and site visit.

Given the limited change to the customer experience, relatively minor changes to the current regulations appear sensible.

### 3.8.4 Initial assessment of change required

Existing regulation	Possible changes required
Limited requirements in this area	Align minimum requirements across electricity and gas

**Q26.** Do you agree with the above assessment? Please provide rationale.

### 3.8.5 Additional considerations

#### 3.8.5.1 Transferring between smart PAYG and non-smart PAYG

If, as described in Section 3.2.5.1, if the Budget Controller solution remains in the smart world, then it may be appropriate to add provisions for moving between these two solutions.

**Q27.** Do you agree that transferring between smart and non-smart PAYG should be considered as part of the detailed regulatory design?

### **3.9 Refund on Change of Supplier**

#### **3.9.1 Current (non-smart) customer experience of refunds**

Scenario	Customer Experience	
	Electricity	Gas
Refund on COS	Must be provided within 2 months	As for electricity

#### **3.9.2 October 2014 Decision**

Decision area	Decision text
Refunding your Credit when you Change Supplier	<p>When Refunding your Credit when you Change Supplier:</p> <ul style="list-style-type: none"> <li>The credit balance that would qualify for a refund will be offset against any residual debt balance that the customer may have.</li> </ul>

#### **3.9.3 Rationale for limited change to existing policy**

Currently, when a non-smart PAYG customer changes supplier, any credit remaining on the meter needs to be returned to the customer, so that they can purchase credit from the new supplier instead. Suppliers are required to provide this refund within 2 months (or as approved by the CER).

Under the smart PAYG solution, the supplier will hold the customer's credit balance in their systems, and will be able to obtain a remote read from the meter to confirm this at the time of the Change of Supplier event.

Because this read will be collected remotely, rather than requiring a site presence, it seems reasonable to expect that the supplier will have the required data more quickly. However, other than the change in timescale, there is no change to the actual refund or Change of Supplier process, and no major change to the regulatory framework in this area seems justified.

### 3.9.4 Initial assessment of change required

Existing regulation	Possible changes required
<p>Suppliers are required to publish a PAYG Code of Practice, which, amongst other things, sets out, for customers:</p> <p>e) The supplier's policy on refunding credit balances (which must take less than 2 months).</p>	<p>Rationale for major change appears limited.</p> <p>However, it may be appropriate for customers to benefit from the shorter data collection timescales, and hence reducing the time allowed for a supplier to refund a credit balance may be justified.</p>

**Q28.** Do you agree with the above assessment? Please provide rationale.

## 3.10 Additional Customer Experience Scenarios

### 3.10.1 Annual PAYG statements

In addition to the eight customer experience scenarios described above, the existing regulatory framework requires suppliers to send statements to customers (at least annually) to advise them of their energy consumption and the payments that they have made.

The CER considers these statements to be another key customer experience scenario under smart metering, given the increase in the granularity of data that can be provided to PAYG customers, and because PAYG customers are more likely to be in financial hardship, and so understanding their energy usage will be of particular importance.

The presentation of energy usage information (including billing for credit customers) was considered as part of the high level design phase, in a separate October 2014 NSMP High Level Design Decision Paper – Presentation of Energy Usage Information. This paper contained the following decision on PAYG statements:

Decision area	Decision text (only PAYG relevant text included)
<b>Presentation of Energy Usage Information (PAYG)</b>	An Energy Statement / information must be delivered to the Consumer (both residential and SME) through existing processes free of any transactional charge, as part of the billing document or a separate document, offering the

	<p>Consumer choice of paper or electronic format.</p> <p>a) With regards to PAYG Consumers, in order to align with credit Consumers, the frequency of provision of the energy statement / information should be in line with EED<sup>13</sup> requirements stating that billing information should be made available at least quarterly on request or where the Consumers have opted to receive electronic billing, or else twice yearly.</p>
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Given that PAYG statements were considered as part of energy usage information in the high level design phase, we intend to take the same approach in this phase of work.



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<sup>13</sup> Energy Efficiency Directive 2012:  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:315:0001:0056:EN:PDF>

## 4.0 Conclusions

### 4.1 Summary

In this consultation document, for each of the eight customer experience scenarios identified in the high level design phase, the CER has set out whether it considers that additional detail over and above that included in the October Decision is required, and if so, what range of detailed design options might be sensibly considered.

For three of the customer experience scenarios, we do not consider that further detail is required to translate the high level design into the regulatory framework. These customer experience scenarios are:

- Becoming a PAYG customer;
- Transferring from PAYG to credit; and
- Refund on COS.

In each of these areas, there is a relatively low level of change to the customer experience, and so the CER considers that relatively minor changes may be most appropriate.

Under the other five customer experience scenarios the CER is of the view that additional detail is needed before the smart PAYG design can be translated into regulation. These customer experience scenarios are:

Customer experience scenario	Detailed design considerations
Topping up your balance	How quickly the customer can expect the credit that they have bought to be added to their account.
Credit runs low	Determining which (if any) of the following parameters should be defined in the regulatory framework: <ul style="list-style-type: none"> <li>• The number of alerts that the customer should receive as their credit runs down;</li> <li>• When the alerts should be sent to the customer and the channel that they are sent via;</li> <li>• The credit level at which alerts are sent (threshold);</li> <li>• The data used to generate the alert (e.g. actual</li> </ul>

	<p>meter read); and</p> <ul style="list-style-type: none"> <li>• The information contained within each alert, for example, this might include the credit level when the alert was generated, the time that it was generated, whether the credit balance has been calculated on actual or estimated data and how long the balance might be expected to last if the customer maintains their “normal” usage.</li> </ul>
Credit runs out	<p>What steps the supplier must take before they can be sure that the customer’s credit balance is at or below zero; and</p> <p>How the existing disconnections policies should be applied to smart PAYG.</p>
Reconnecting your supply	<p>How quickly the customer can expect to be reconnected when they have applied credit; and</p> <p>How the supplier decides whether the credit bought by the customer is enough to trigger a reconnect.</p>
Viewing your credit balance	<p>What (if anything) the supplier should be obliged to do with a customer provided meter read, e.g. provide an indicative (un-validated) balance update; and</p> <p>Whether a supplier should be obliged to take active steps to enable customers to submit such information for the purpose of recalculating a credit balance.</p>

In this consultation, we seek your views, for each of these areas on:

- Our rationale for further consideration of area;
- The range of detailed design policy frameworks that we consider could reasonably be implemented in line with the high level design; and
- The description of the features of each example, drawing out factors that appear relevant to assessing and commenting on their relative merits .

A full list of the questions being asked in this consultation is available in Appendix A.

## **4.2 Next Steps**

This consultation will close on Tuesday 12 May 2015.

After the consultation, the CER will consider the responses received, and determine what further analysis is required to inform a decision on the detailed policy framework for smart PAYG (e.g. customer focus groups). It will also, where necessary, progress further engagement with stakeholders through meetings and workshops.

The next document will firm up on proposals in respect of the PAYG consumer policy questions. Depending on the responses received to this consultation and any relevant input garnered from focus groups, the CER will issue a further round of consultation or potentially move to a draft decision on issues where there is a sufficient evidence base. The next paper will be published in July 2015.

Again, subject to the evidence base, this will be followed by a draft decision or a final decision document to be published in November 2015. This paper will move to conclude on the definition of the further policy that is required to ensure PAYG smart services deliver an appropriate customer experience and facilitate competition between suppliers.

The table summarises these indicative dates:

Paper	Indicative publication date
<ul style="list-style-type: none"> <li>▪ Consultation / Draft Decision on PAYG</li> </ul>	July 2015
<ul style="list-style-type: none"> <li>▪ Draft Decision / Decision on PAYG</li> </ul>	November 2015

It is also important to note that the consumer policy work in respect of PAYG is one element of a wider program of work, which will be progressed through a series of related consultations. This phase of work is scheduled to conclude across all policy areas by Q2 2016. The full schedule is set out in *CER15/052 The National Smart Metering Programme – Phase 3 Overview*.

## Appendix A – List of Substantive Questions

The aim of this section is to allow for a “short-cut” option for respondents to submit their comments to the CER. Respondents are invited to complete the table to indicate their position on the questions being asked. Respondents should outline YES or NO answers to each of the questions listed. If they have a further comment that will clarify their answer, this should be included in the Comments box.

Please note: Respondents are in no way obliged to respond to the questionnaire provided and are welcome to submit comments in their preferred format. When preparing responses respondents should indicate which question or proposal their text refers to.

Question		Response		
No.	Question	Yes	No	Rationale
1	Do you agree with the above assessment? Please provide rationale.			
2	Respondents are invited to provide their views on the interaction between smart PAYG and Budget Controllers as part of the transition to smart PAYG, both from an individual customer perspective and more broadly, in relation to market interactions.			
3	Do you think that this range accurately depicts the range of <i>possible</i> detailed policy designs in this area that are consistent with the high level design? If no, please explain why.			
4	Respondents are invited to provide their views on these examples.			
5	Do you agree that further policy detail is required in respect of how the minimum alert levels are set?			

	Please provide rationale.			
6	Do you think that this range accurately depicts the range of possible detailed policy designs in this area that are consistent with the high level design? If no, please explain why.			
7	Respondents are invited to provide their views on these examples.			
8	Do you consider that this is a significant enough issue to require additional regulatory provisions to minimise the possibility of a customer missing an alert?			
9	Do you agree that further policy detail is required in relation to the minimum provisions for customers as their credit runs out? Please provide rationale.			
10	Do you think that this range accurately depicts the range of possible detailed policy designs in this area that are consistent with the high level design? If no, please explain why.			
11	Respondents are invited to provide their views on these examples.			
12	Do you believe that these provisions – emergency credit and friendly credit periods should remain in place for smart PAYG?			
13	Should friendly credit provisions be extended to cover gas?			
14	Do you think that requirement should be considered for the length of time that it takes the			

	network to deliver the daily meter read?			
15	Do you think that a requirement should be considered for the length of time that it takes the supplier to apply the meter read to the customers balance?			
16	Do you consider that some customers may have additional requirements for topping up? And if so, should the regulatory framework make provision for this? Please provide rationale.			
17	Do you agree that further policy detail is required in relation to the minimum provisions for how quickly PAYG customers are reconnected? Please provide rationale.			
18	Do you think that this range accurately depicts the range of <i>possible</i> detailed policy designs in this area that are consistent with the high level design? If no, please explain why.			
19	Respondents are invited to provide their views on these examples			
20	Do you agree that the question of how to calculate/estimate the top up amount required to reconnect should be considered further in this phase of work?			
21	Which of the above methodologies do you consider preferable? Please explain your rationale.			
22	Do you agree that further policy detail is required in relation what the minimum provision of			

	information is to customers when they request their credit balance? Please provide rationale.			
23	Do you think that this range accurately depicts the range of <i>possible</i> detailed policy designs in this area that are consistent with the high level design? If no, please explain why.			
24	Respondents are invited to provide their views on these examples.			
25	Do you consider that the on demand balance will be more important for customers in financial hardship to have? And if so, should the regulatory framework make provision for this? Please provide rationale.			
26	Do you agree with the above assessment? Please provide rationale.			
27	Do you agree that transferring between smart and non-smart PAYG should be considered as part of the detailed regulatory design?			
28	Do you agree with the above assessment? Please provide rationale.			
29	Do you have any further comments?			

## Appendix B – Glossary of Terms

This appendix sets out the technical terms and acronyms used within this document.

Acronym	Term	Definition
-	Bill Pay	A customer who pays for their energy after they have used it, following a bill from their supplier
-	Budget Controller	A PAYG electricity device installed in a customer's home to measure their energy usage – installed in series with the existing ESB Networks meter (which is still used for settlement)
-	Emergency Credit	A minimum of €5 which is available to the PAYG customer when they are very low on credit
ESBN	ESB Networks	-
-	Existing Regulatory Framework	The current set of regulatory documents that industry participants are required to comply with in order to participate in the market – which includes (but is not limited to) Supply and Network Licences and the Supply Handbook
-	Keypad	An interface device which is used by customers with a Budget Controller to view their balance and apply credit to their account
-	Friendly Credit (Period)	Friendly credit periods are periods of time when electricity customers cannot automatically disconnect. If a customer goes below zero credit during a friendly credit period (e.g. on a Public Holiday) then they will not automatically disconnect until the friendly credit period ends

GNI	Gas Networks Ireland	-
-	Load Limiting	A mechanism that allows the flow of energy to a property to be restricted, but not completely stopped
NSMP	National Smart Metering Programme	-
-	October 2014 Decision	The decision s that CER has already made in relation to the high level design of the smart PAYG solution – the October 2014 Decision is available on the CER website.
PAYG	Pay As You Go	A customer who pays for their energy in advance, by purchasing top ups (credit) from a local shop or online
PP	Prepayment	See PAYG (same meaning)
-	Self-disconnection or Automatic disconnection	When a PAYG customer uses all of their credit, then their meter will disconnect the supply (after the customer has been offered/used emergency credit)
-	Top Up	PAYG customers purchase credit (usually online or in a shop) – this credit is often called a “top up”
SLA	Service Level Agreement	-

## Appendix C – NSMP Strategic Objectives

The NSMP has the following strategic objectives (which apply to both electricity and gas unless stated otherwise):

1. **Encourage Energy Efficiency** - encourage end-use energy efficiency via enhanced information and pricing signals, resulting in reductions in overall energy usage and thus reduced emissions of carbon dioxide, nitrogen oxides and sulphur oxides as a measure to combat climate change and reduce pollution.
2. **Facilitate Peak Load Management (electricity only)** - reduce demand for peak electrical power, with consequential electricity generation savings and improved security of supply. This can be achieved via pricing signals such as TOU tariffs, where the price of electricity varies at different times of the day to reflect the changes in the costs of producing electricity. Other options include automated demand side management and direct load control (via aggregators).
3. **Support Renewable and Micro Generation (electricity only)** - assist in achieving of Ireland's stated national targets for renewable electricity generation (40% by 2020) by facilitating demand response solutions that will complement increasing levels of intermittent wind generation on the electricity system. And to facilitate the wider take up of micro generation.
4. **Enhance Competition and Improve Consumer Experience** - support more timely and efficient change of supplier process for consumers, and promote competition by enabling suppliers to offer consumers:
  - a) Accurate billing;
  - b) Accurate, detailed and more frequent information on their energy consumption and costs;
  - c) More innovative products to support the efficient use of electricity (balanced by the need to protect consumers from a proliferation of complex tariff products leading to confusion); and
  - d) A more diverse service offering to consumers from suppliers including in the area of prepayment product offerings.
5. **Improve Network Services** - improve services to consumers, particularly in areas such as meter reading, fault monitoring and electrical power quality. Significantly improve theft prevention and measure losses more accurately.

These objectives have been used as guiding principles in the decision making throughout the programme.