



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

**CER National Smart Metering Programme  
Smart Metering High Level Design**

DOCUMENT TYPE:	<b>Proposed Decision Paper</b>
REFERENCE:	<b>CER/13/286</b>
DATE PUBLISHED:	17 <sup>th</sup> December 2013
CLOSING DATE:	24 <sup>th</sup> January 2014
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## CER – Information Page

### Abstract:

This paper outlines CER's proposed decisions with regard to High Level Design of the smart metering solution. The proposed decisions are broken down into the following areas:

The **Core Design** outlines the principle building blocks of the proposed smart metering architecture and describes the main information flows between the consumer and their energy supplier.

The introduction of **Time of Use (ToU)** pricing is a key component of the NSMP and will contribute significantly to realising the benefits and opportunities created by the rollout of smart meters.

The **Presentation of Energy Usage Information** to consumers will provide the consumer with greater insight into their energy consumption, and the associated cost of their consumption.

The **Pay As You Go (PAYG)** decisions describe how the PAYG processes will operate when gas and electricity smart meters have been installed.

CER invites feedback on the proposed decision outlined in this paper.

### Target Audience:

This paper is for the attention of members of the public, the energy industry, customers and all interested parties. It is of less relevance to large electricity and gas users because such customers will not be directly affected by the National Smart Metering Programme (NSMP).

### Related Documents:

NSMP documentation is available on the CER website [here](#).

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## 1. Introduction

### 1.1 Overview

#### 1.1.1 What Are Smart Meters?

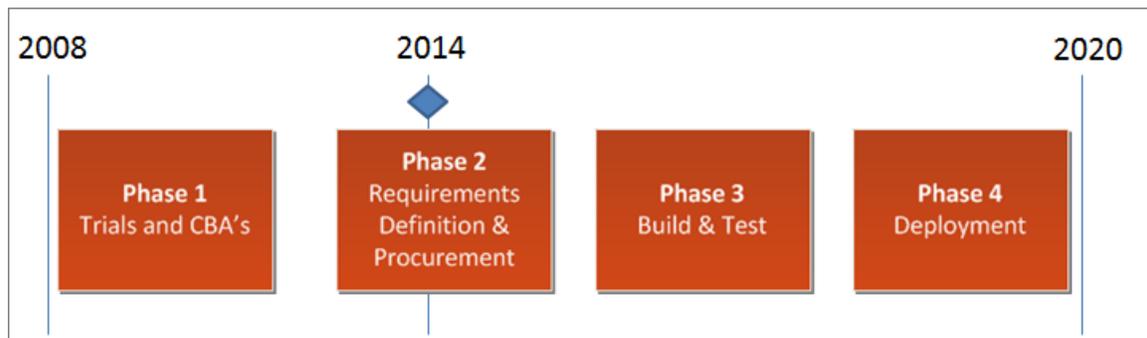
Smart Meters are the next generation of energy meter. They will replace the traditional electricity and gas meters removing the need for a home visit to read the meter. This will eliminate the need to use estimates whenever a meter cannot be read.

Smart meters work by communicating with you and your energy provider giving a view of actual energy usage. This provision of actual consumption information delivers benefits such as;

- Providing consumers with a mechanism to reduce their electricity bill by enabling the consumer to shift some of their electricity usage away from (more expensive) peak consumption times;
- Informing consumers of their actual usage in electricity and gas therefore allowing them to avoid unnecessary consumption and cost; and
- Helping the environment through reducing overall energy production.

#### 1.1.2 A Brief History

The CER, working closely with the Department of Communications, Energy and Natural Resources (DCENR), established the National Smart Metering Programme (NSMP) in late 2007. In Phase 1, a trial was carried out in order to assess the costs and benefits of smart meters and to inform decisions relating to the full rollout. In July 2012 a decision was announced to rollout electricity and gas smart meters for all residential and small and medium sized businesses. Phase 2 commenced in January 2013 and is broadly composed of a design and procurement phase.

**Figure 1: High Level NSMP Timelines**

## 1.2 Purpose of this Paper

This paper outlines the proposed decisions with regard to the high level design stage within Phase 2:

1. The Core Design of the smart metering solution. The Core Design section outlines the principle building blocks of the proposed smart metering architecture and describes the main information flows between the consumer and their energy supplier. Further details are available in section 2.2.
2. Time of Use tariffs. This section details the framework for time of use tariffs for residential and SME customers. Further details are available in section 2.3.
3. The Presentation of Energy Usage information to consumers. In order to provide the consumer with greater insight into their energy consumption, and the associated cost of that consumption, a number of proposed decisions are outlined in section 2.4.
4. The Pay As You Go (PAYG) solution. The introduction of smart metering facilitates enhancements to the existing Prepayment solution. Further details are available in section 2.5.

These proposed decisions have been informed by the responses received to Summer/Autumn consultations <sup>1</sup>

Respondents are invited to comment on the proposals outlined in this paper by Friday 24<sup>th</sup> January 2014.

<sup>1</sup> CER/13/151<sup>1</sup> & CER/13/152<sup>1</sup>, published 19<sup>th</sup> July 2013 and CER/13/164<sup>1</sup> & CER/13/165<sup>1</sup>, published 6<sup>th</sup> September 2013.

### **1.3 Structure of this Paper**

- **Section 2:** provides a summary of all the proposed decisions across the National Smart Metering Programme (NSMP) work streams for which a corresponding Consultation paper was issued in 2013.
- **Section 3:** provides an overview as to immediate next steps for the Smart Metering Programme
- **Appendix A – D:** appended proposed decision papers (NB: appended as separate files), namely:
  - Appendix A: Core Design
  - Appendix B: Time of Use (ToU)
  - Appendix C: Presentation of Energy Usage Information
  - Appendix D: Pay As You Go (PAYG)
- **Appendix 1:** provides links to relevant reference material
- **Appendix 2:** includes a glossary of terms used in all papers

### **1.4 Consultation Background**

Phase 2 of the NSMP has been underway since January 2013. The proposed decision and subsequent decision papers will contain the key policy outputs of the high level design phase. These will form the basis for the development of a procurement strategy which will allow ESNB and BGN to commence the procurement process for significant portions of the smart metering solution. Detailed implementation plans will be available following the definition of the procurement strategy.

Consultations on the Core Design (formally known as the Steady State model), Time of Use Tariffs, the provision of Energy Usage Information and Pay As You Go were published over the Summer/Autumn 2013. This paper follows on from those consultations and proposes a set of decisions for each topic.

A set of decision papers representing a consistent and integrated design for the smart metering solution is planned to be issued in February 2014.

## ***1.5 Responding to this Paper***

CER invites all interested parties: members of the public, the energy industry, and customers, to comment on the proposed decisions in this paper by close of business on **Friday 24<sup>th</sup> January 2014**.

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)

## ***1.6 Legal Standing***

The CER, working closely with the Department of Communications, Energy and Natural Resources (DCENR), established the National Smart Metering Programme (NSMP) in late 2007. In Phase 1, a trial was carried out in order to assess the costs and benefits of smart meters and to inform decisions relating to the full rollout. In July 2012 a decision was announced to rollout electricity and gas smart meters for residential and small and medium sized businesses. Since then, the CER has also been designated as the Competent Authority for the purposes of the rollout of the Smart Metering Programme.

In developing smart metering policy to complement the roll out of meters, the CER and the Department for Communications, Energy and Natural Resources are in discussions on any legal provisions that may be required to support the smart metering programme.

## 2. Summary of Proposed Decisions

### 2.1 Introduction

The CER acknowledge that the NSMP represents a significant change to the retail electricity and gas markets in Ireland. The CER is committed to delivering the programme objectives while not introducing unnecessary complexity into the existing market processes.

This section provides a summary of all the proposed decisions following the summer/autumn consultations. The rationale for the decisions presented here is provided within the relevant Appendix A to D.

### 2.2 Core Design

The following section outlines the CER's proposed decision on its preferred design of the future gas and electricity markets where smart meters have been installed. This proposed decision has been informed by responses to the recent consultation.

The July 2013 Consultation paper (CER/13/151 – Steady State Model (SSM)) outlined two representative models, namely:

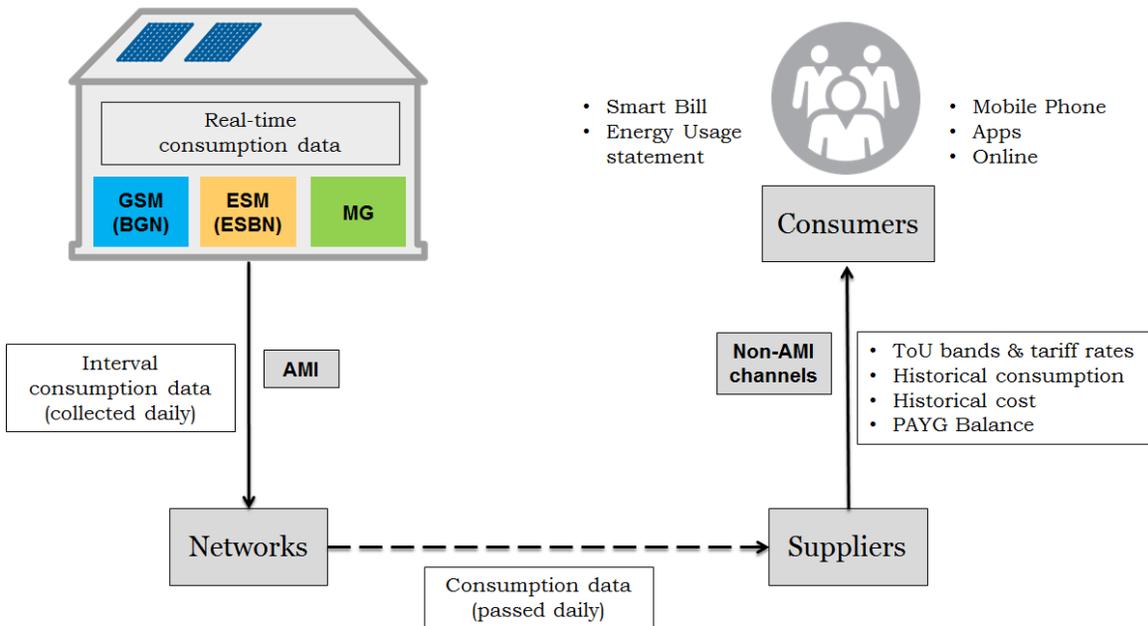
1. The SSM, where;
  - a. Minimal functionality is performed on the smart meter.
  - b. Back office systems perform the majority of data processing and hold 'Master' versions of key data sets.
2. A model based on a set of alternative working assumptions (AWA), where:
  - a. Increased functionality is performed on the Meter.
  - b. The Automated Metering Infrastructure (AMI) carries additional information messages relating to ToU bands, tariff rates and calorific values.

CER proposes that the optimal solution is one where industry back office systems perform the majority of the data processing and minimal processing is performed by the meter. This is Option 1 above. The remainder of this document adopts the term "Core Design" to represent the preferred model. This proposed decision is supported by the following rationale:

1. **Majority support** for the SSM from responses received to the July 2013 SSM Consultation paper. A summary of these responses is provided in Appendix A – Core Design.
2. **Majority support** for SSM from responses to the August 2013 PAYG Consultation paper. A summary of these responses and evaluation is provided in Appendix D - PAYG.
3. **A qualitative analysis** is provided in ‘Appendix A – Core Design’ on how the core design strategically aligns to the Design Principles, as set out in July 2013 SSM Consultation paper.
4. **A high level indicative cost gathering exercise** initiated by CER involving Suppliers and Networks (i.e. ESNB and BGN) highlighted more investment would be required by these industry stakeholders to deliver the AWA model.
5. **The Time of Use (ToU) “minded-to” position** requires flexibility for suppliers to offer a variety of TOU products. The SSM provides this flexibility for suppliers to create ToU products without being constrained by necessitating changes to the All-Island Retail Market processes. The ToU minded-to position is outlined in Appendix B - ToU
6. **Consumer focus group feedback** indicated a high expectation for rich information which is best delivered via channels under supplier control (e.g. Online, Apps, Mobile phone) and not via the smart meter. In addition, the functional requirements proposed in the consultation paper on the presentation of energy usage information to the consumer are supported by the Core Design.

The diagram below provides a high level overview of how the Smart Meters (Gas and Electricity) will capture consumption data in the home and present relevant information back to the consumer.

**Figure 2: High Level Overview of Core Design**



- GSM** – Gas Smart Meter provided by Bord Gais Networks (BGN)
- ESM** – Electricity Smart Meter provided by Electricity Supply Board Networks (ESBN)
- MG** – Micro-Generation meter provided by parties yet to be determined
- AMI** – Automated Meter Infrastructure
- ToU** – Time of Use
- PAYG** – Pay As You Go (enhanced form of PrePayment)

The diagram is provided above to provide context to the key design decisions underpinning the core design, which are shown in the table below:

Area	Description	Reference for more detail
<b>Real-time data (Consumption &amp; Cost)</b>	<ul style="list-style-type: none"> <li>• Real-time consumption data is provided over the Utility Home Area Network (UHAN) to the Home, where technically feasible.</li> <li>• The AMI does not carry ToU bands, tariff rates or calorific value related information messages. Suppliers will provide ToU band and tariff rate information to consumers via non-AMI channels to enable the cost calculation of real-time consumption.</li> </ul>	<ul style="list-style-type: none"> <li>• Appendix A3 - Data and Devices in the Home</li> <li>• Appendix C - Presentation of Energy Usage Information</li> </ul>

Area	Description	Reference for more detail
<b>Historical data (Consumption &amp; Cost)</b>	<ul style="list-style-type: none"> <li>• The Core Design supports the collection and provision of half hourly interval consumption data by networks to suppliers on a daily basis.</li> <li>• Historical consumption and the cost of that consumption are presented to consumers via non-AMI channels under supplier control (e.g. Online, Apps, Mobile phone).</li> </ul>	<ul style="list-style-type: none"> <li>• Appendix A1 - Information from the Home</li> <li>• Appendix C - Presentation of Energy Usage Information</li> </ul>
<b>Presentation of PAYG Balance</b>	PAYG balance is provided to consumers via non-AMI channels under supplier control (e.g. Online, Apps, Mobile phone).	Appendix D - PAYG

See CER/13/286 **Appendix A – ‘Core Design’** for more details regarding the key processes within the Core Design.

## 2.3 *Time of Use (ToU)*

The introduction of ToU pricing is a key component of the NSMP and will contribute significantly to realising the benefits and opportunities created by the rollout of smart meters. ToU tariffs will offer consumer the ability to use electricity at cheaper times.

This section sets out the CER's proposed decision on the form of ToU tariff mandate for electricity retail tariffs that it is minded to implement through regulation.

### **Proposed Decision relating to the TOU Tariff Mandate**

The proposed decision on the form of TOU electricity tariff mandate has five core components:

- An obligation on each supplier to develop:
  - a single standard domestic TOU tariff structure of a form prescribed by the CER, which domestic customers of that supplier will migrate to by default at an appropriate time following the installation of their smart meter; and
  - an appropriate range of standard TOU tariff structures, which are of a form that is consistent with certain criteria set by the CER, and to one of which SME customers of that supplier will migrate to by default at an appropriate time following the installation of their smart meter.
- The ability for customers (SME and domestic) to choose from other TOU tariffs that might be developed and offered by their supplier, or by other competing suppliers – subject to the form of such tariffs meeting certain criteria to be set by the CER.
- The establishment of a “test bed” to enable suppliers and interested customers to move on to more sophisticated tariffs (such as dynamic tariffs, where the cost of consumption can vary at short notice) on a trial basis, with limited numbers of customers and for limited periods of time.
- Progression of complementary reforms, in parallel with the TOU tariff mandate, in particular to require that aggregated half-hourly consumption data from smart meters be used to determine the volume of electricity each supplier is charged for in Ireland's electricity wholesale market.
- A commitment by the CER to monitor the developing tariff environment underpinned by this approach, and to amend the framework as required – based on the evidence.

In developing the form of the TOU mandate in electricity, the CER has also been careful to consider related issues in gas, and potential interactions between the electricity and gas markets. These issues were consulted upon in July 2013.

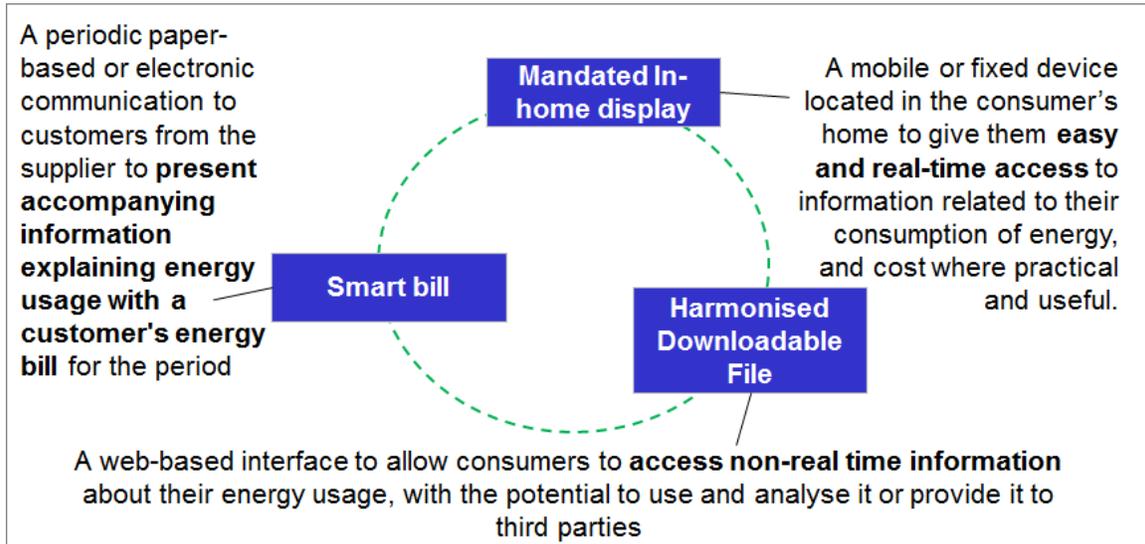
Having analysed consultation responses and performed additional analysis, the CER is not mandating ToU gas tariffs for domestic or SME customers at this time. The CER will, however, review and analyse the potential issues in relation to interactions between gas and electricity retail competition and dual fuel offerings in due course.

See CER/13/286 **Appendix B – ‘Time of Use Tariffs’** for more details regarding the form of the proposed tariff framework.

## 2.4 Presentation of Energy Usage Information

Minimum information requirements regarding a consumer's energy usage will be provided through three primary information channels:

**Figure 3: Overview of Presentation Channels to Consumers**



The combined purpose of these different information channels is to encourage more efficient use of energy by consumers and to enable them to take control of their own consumption patterns. This section sets out CER's proposed decision for information provision to the consumer through each channel.

### **2.4.1 Smart Bill**

#### **Proposed Decision relating to Smart Billing Requirements**

1. 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 Consumer choice of paper or electronic format.
  - 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 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.
2. Suppliers must provide information relating to any time of use tariffs in place for electricity and gas for that Consumer, including a clear overview of the applicable tariffs for the current billing period and any other relevant charges or rebates, as well as information needed to identify the relevant tariff periods and Consumer energy consumption and cost during those tariff periods.
3. The consumption information provided to the Consumer for the current billing period should be made available for comparison on the Smart Bill on an aggregate basis for the same billing period in the previous year, where there is sufficient historical billing information to provide such a comparison.
4. The following contact and reference information relating to where additional information can be found, should be provided in an appropriate form to the Consumer in their Smart Bill:
  - Independent Consumer advice centres;
  - Energy agencies or similar institutions;
  - Advice on energy efficiency measures;
  - Benchmark profiles for their energy consumption; and
  - Technical specifications for energy using appliances
5. Hints and tips on how to reduce or shift their energy consumption and ultimately cost to the Consumer will be provided in the Smart Bill.
6. Where smart meters are installed complementary energy consumption information will be made available to the Consumer on request, at intervals where billing information has been produced for the previous three years or from the start of the supply contract if this is shorter.

## 2.4.2 Harmonised Downloadable File

### Proposed Decision relating to the harmonised downloadable file requirements

1. The Consumer will have the ability to access their half hourly interval consumption data on request via the internet. It will be provided to them in a standard harmonised format to enable them to analyse or share the interval data with an alternative Supplier or Third party offering other services. Third parties will not be able to access this data directly from Suppliers/Networks but only via Consumer consent.
2. It is CER's intention to require both Networks and Suppliers to provide this service. The Consumer will have access to their consumption data:
  - a. For at least 24 months or from the start of their supply contract, whichever is shorter (Supplier provided service); or,
  - b. For at least 24 months or from the point of smart meter installation, whichever is shorter (Networks provided service).

*Supplier and Network receipt, or access to this granular data is currently under review to ensure compliance with Data Protection Legislation through engagement with the DPC.*
3. It is expected that, where the Consumer requests it and it is available, export data will also be made available to them through the same process.
4. The provision of this information will be provided free of any transactional charges and within a reasonable time frame.
5. The functionality required to fulfil the proposed requirement is as follows:
  - a. Secure access for the Consumer to a web interface.
  - b. Functionality to export historical consumption data in a consistent and widely used, standardised format. The intention is not to restrict data provision to this single format, but the intention is to define a standard format that will always be available.
  - c. The specification of minimum data presented in the harmonised format for the historical consumption should contain the MPRN/GPRN and the associated Meter Serial Number (MSN) split by date showing the consumption used in each of the 48 half hourly periods within the day for the selected time period.

### **2.4.3 Mandated IHD<sup>2</sup>**

#### **Proposed Decision relating to Mandated In-Home Display Requirements**

1. A MIHD will be offered to all residential customers<sup>1</sup>.
2. MIHD Functionality will include as a minimum
  - a. Presentation of Consumption data
    - i. Instantaneous Active Electricity Demand (Real-Time): MIHDR01
    - ii. Up to Date Consumption Position in Time Period (Cumulative gas and electricity: current day, week and month): MIHDR02
    - iii. Ambient feedback on the basis of Electricity Time of Use Bands: MIHDR04
  - b. Presentation of indicative Cost data (not bill quality)
    - i. Instantaneous indicative Cost of Electricity Demand : MIHDR01(a)
    - ii. Up to Date indicative Cost Position in Time Period (Cumulative gas<sup>1</sup> and electricity): MIHDR02(a)
    - iii. Time of Use Bands and Price Information (electricity only): MIHDR05
3. A feasibility study will be conducted by ESNB, with involvement from the wider industry, during 2014 to identify viable options (from both a technical & economical perspective) to enable automatic updates of TOU band/tariff rates to the MIHD (assuming no change to the Core Design). The full scope and criteria used in this study will be defined in 2014.
4. If the CER is of the view that automation is not feasible, a basic MIHD will be procured by Networks which delivers the following minimum functional requirements in addition to the above:
  - a. Has the default TOU bands pre-configured (default TOU only) for the ambient feedback: MIHDR04
  - b. Allows for manual input of tariff rates by Consumers: MIHDR05
5. ESNB will be responsible for:
  - a. Procuring the MIHD
  - b. Installing the MIHD during the Meter installation process<sup>1</sup> (based on Consumer acceptance of MIHD offer and technical feasibility of installation e.g. HAN signal)
  - c. Providing technical support for 2 years from the date of MIHD installation (this may be subject to review when considering transition/implementation & timing of default TOU)

<sup>2</sup> MIHD will not be offered to SME customers.

6. Suppliers will be responsible for:
  - a. Providing support to the Consumer in relation to TOU bands and tariff rates and any activities required to update these on their IHD.
  - b. Providing historical cost and consumption data to Consumers on request using appropriate means for their Customers (e.g. web; smart bill, app): MIHDR03. The CER will develop further guidelines regarding the format and response timing for the provision of this information in the next phase of the NSMP.
  - c. if suppliers are offering their Customers non-default TOU products with different time bands, suppliers will be asked to offer an appropriate solution to meet minimum information requirements as specified in decision point 2 (in line with the period specified for technical support in decision point 5c).
7. There will be no input / configuring of price data into the MIHD by ESNB. It will be up to the Consumer to input price data or for the supplier to update this data automatically if feasible. Appropriate guidance regarding inputting price data will be given to the Consumer at MIHD installation.

There will be a proportion of Consumers who will not be able to have a MIHD installed because of technical reasons (e.g. no HAN coverage) and the information requirements for those Consumers will be further investigated by the CER in the next phase of the NSMP. The CER will work with industry to determine any specific information provision requirements for these Consumers.

See CER/13/286 **Appendix C – ‘Presentation of Energy Usage Information’** for more details on the above decisions.

## **2.5 Pay As You Go (PAYG)**

Consumer choice and the ease with which consumers are able to choose between PAYG and credit for electricity and gas are central to the PAYG solution. Smart meters will enable consumers to move seamlessly from PAYG to credit, or vice versa, using the same meter.

The following section describes how a Pay as You Go Solution will work when smart meters have been installed.

### **Proposed Decision relating to Pay As You Go model:**

- The PAYG processes will be designed based on the Core Design.

In CER/13/165 CER set out a number of customer experiences that must be considered when determining the most appropriate retail market structure. The following section outlines the CER proposed decisions.

### **Proposed Decision relating to becoming a PAYG Customer:**

When Becoming a PAYG customer

- Seamless switching between payment modes will be supported to promote customer mobility and supplier innovation.
- A new customer account can be setup as PAYG for gas and / or electricity supplies.
- Suppliers will not be required to remotely interact with the meter when setting up a PAYG customer for the first time.
- Credit and debt balance information will be held by suppliers.

**Proposed Decision relating to transferring from PAYG to Credit Payment Method:**

## When Transferring from PAYG to Credit Payment Method

- Customer credit balance information will be held in the suppliers back office systems (not on the meter).
- The supplier will arrange the effective time/date for the transition of payment mode with the customer.
- Suppliers will credit the customer account with any positive credit balance remaining from the PAYG payment mode.

**Proposed Decision relating topping up your Credit Balance:**

## When Topping up your Credit Balance

- Payments will be processed centrally (back office systems) without interaction with the meter.
- Retail point of sale transactions shall be credited to customer credit balance subject to SLA's (this is expected to be near real-time).

**Proposed Decision relating to viewing your Credit Balance:**

## When Viewing your Credit Balance

- 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.
  - If a customer cannot access the core channels offered by the supplier an alternative option must be provided by the supplier.
- The credit balance will be held and maintained on supplier systems
- 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.
- Where credit balance is displayed to customers the message will indicate when the last energy charges were calculated.

**Proposed Decision relating to refunding your Credit when you change supplier:**

When Refunding your Credit when you Change Supplier:

- The credit balance which would qualify for a refund will be offset against any residual debt balance that the customer may have.

**Proposed Decision relating to how you are alerted when your Credit is Running Low:**

- A PAYG customer shall be alerted when credit falls below agreed credit thresholds.
  - Minimum threshold level(s) will be agreed as part of the next phase of the programme.

**Proposed Decision relating to when your Credit Runs Out:**

When your Credit Runs Out:

- Customers are alerted when their credit balance is at or below zero
- Customers who do not top-up with sufficient credit will be disconnected or remain disconnected
- Disconnection will remain in line with existing Friendly Credit periods.

**Proposed Decision relating to Reconnecting your Supply:**

When Reconnecting your Supply

- A customer must be reconnected when their credit balance is positive (above zero)
- The reconnection must occur within specified SLA's to be agreed at a later stage in the programme

See CER/13/286 **Appendix D – 'Pay As You Go'** for more details regarding the proposed PAYG processes.

## **2.6 Data Protection**

One of the strategic objectives of the NSMP is to ensure that data protection is central to the smart metering design. As noted in the Decision on the National Rollout of Electricity and Gas Smart Metering CER/12/008, data protection requirements have been considered by the CER, and continue to be considered with the involvement of the Data Protection Commission (DPC).

The data protection implications have been carefully considered as smart meters will result in a fundamental change in the amount of data that is collected and used by the energy industry. This data, when accompanied with other information which is associated with an individual person, is considered “Personal Data”, and thus the Data Protection Act is engaged. The Article 29 Working Group and the European Data Protection Supervisor have issued opinions on the extent to which this data can be considered to impact on personal privacy.

Various initiatives are underway which will help the CER to strike the right balance between protecting the privacy of consumers while also meeting the strategic objectives of the NSMP, such as:

- A Call for Evidence (CFE) was issued to industry stakeholders in October 2013 to enquire about what level of granular consumption data is required for different data purposes. The outcomes of this initial step are currently being considered with no decisions yet made about access to data. Further engagement with stakeholders during 2014 will help to establish the appropriate arrangements.
- Applying best international practice, a Privacy Impact Assessment (PIA) has been completed which assessed a range of possible privacy risks at the programme level. Work is now underway to address the key issues that have been highlighted and to integrate the recommendations into the NSMP.

Looking forward, the NSMP will continue to incorporate “privacy-by-design” principles to ensure that best practice considerations are incorporated within the relevant decisions. Accordingly, the CER considers it vitally important that it works with the DPC to ensure that the arrangements that are put in place to deliver the NSMP objectives are compliant with Data Protection Legislation.

The CER propose to develop a coherent data access and privacy framework to underpin the arrangements for access to data, with rules for suppliers, networks and third parties. It is hoped that consumers will continue to have confidence in

the programme, and the CER will continue work on the PIA and work towards a privacy charter. In tandem, the CER is mindful of lessons learnt from other international programmes and the importance of applying best practice considerations.

## **2.7 Security**

Full end to end security of the smart metering system is of paramount importance. The 2012 information paper “Rollout Security Principles” produced by ESNB and BGN has helped inform the Core Design. CER will work with ESNB, BGN and other industry stakeholders to ensure security is fully integrated into the smart metering solution.

## 3. Next Steps

### 3.1 Timelines

A summary of the timelines for the next steps in the consultation process is outlined below:

Date	Action
17 December 2013	Proposed Decision Paper Published
24 January 2014	Proposed Decision Paper - Consultation Period Closes
28 February 2014	Decision Published

### 3.2 Key NSMP activities in 2014

#### 3.2.1 CBA Re-run

The original electricity and gas smart metering cost-benefit analyses delivered in 2011 will be recalibrated in order to inform 'Go / No-Go Decisions' at appropriate stages prior to full rollout. This exercise will involve:

- Collection of revised cost and benefits from relevant industry stakeholders.
- An independent review of all revised cost and benefits inputs into the CBAs by consultants on behalf of the CER.
- A re-running of the CBA models.

Findings from the updated CBA will inform the overall design decisions.

#### 3.2.2 Networks Procurement

Assuming there is a positive decision to proceed after the CBA re-run, ESNB and BGN will undertake procurement processes to procure the relevant components of the smart metering solution for which they are responsible.

#### 3.2.3 Further Work

Following on from the successful completion of high level design phase, the Network companies will lead the detailed design of the Market Systems changes required to support smart metering. It is expected that the industry stakeholders will actively participate in this process. In parallel a range of activities will take place across various other work streams (e.g. Data Protection, Consumer Engagement, Policy, more detail on the Time of Use tariffs) and this detail will allow suppliers to plan their own procurement and build activities.

## 4. Appendix 1 – Reference Material

### ***CER Reference Material***

CER 'Decision on the National Rollout of Electricity and Gas Smart Metering' 4<sup>th</sup> July 2012

<http://www.cer.ie/document-detail/Smart-Metering/117/703,714,726,661,673,684,696,685,708,719,666,677,720,731,678,690,701,732,702,713,659,660,671,725,672,683,695,707,718,665,730,689,712,670,724,682,694,706,664,676,688,700,711,723,658,693,705,717,663,675,729,687,699,669,734,681,692,704,716,662,674,728,686,698,710,668,722,733,680,691,715,727,697,709,667,721,679>

CER 'Smart Metering Information Paper and Appended Reports' 17<sup>th</sup> December 2012

<http://www.cer.ie/document-detail/Smart-Metering-Information-Paper-and-Appended-Reports/23/94,95,96,97,98,99,100,101,102,103,104,105,106>

### ***Irish Legislation***

Statutory Instrument S.I No. 542 of 2009 'European Communities (Energy End-Use Efficiency and Energy Service) Regulations 2009'

<http://www.irishstatutebook.ie/2009/en/si/0542.html>

### ***European Legislation***

Third package for Electricity and Gas markets

[http://ec.europa.eu/energy/gas\\_electricity/legislation/third\\_legislative\\_package\\_en.htm](http://ec.europa.eu/energy/gas_electricity/legislation/third_legislative_package_en.htm)

EC Energy Efficiency Directive

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

Note: All links correct at time of publication.

## 5. Appendix 2 – Glossary of Terms

Term	Description
<b>AMI</b>	The Automated Meter Infrastructure (AMI) relates to the components to be procured by Networks. The scope of the AMI includes all the components required to facilitate data processing from and including the Meter Data Management Systems (MDMSs) to the Meters and Mandatory IHD (inclusive).
<b>Any IHD</b>	Any other in-home device to present data to the Consumer. Does not require any secure pairing with the ESM since this is achieved via the CAD. This may include existing Consumer devices (e.g. TVs, tablets, phones, PCs, etc.)
<b>ATM</b>	Automated Teller Machine (Cash Point)
<b>AWA</b>	Alternative Working Assumptions
<b>BAU</b>	Business As Usual
<b>BGN</b>	Bord Gáis Networks
<b>CAD</b>	Consumer Access Device that may be provided by the Consumer; Supplier; or 3rd Party. Securely paired with the ESM via the U-HAN to take energy data. Interfaces via an unspecified communications technology (C-HAN) with other devices in the home that may include “Any IHD” or end-use devices.
<b>CES</b>	Customer Experience Scenarios
<b>CFE</b>	Call For Evidence
<b>CoLE</b>	Change of Legal Entity
<b>CoS</b>	Change of Supplier
<b>CoT</b>	Change of Tenancy
<b>CSI</b>	This refers to an internal NSMP work stream which addressed the channels through which a Consumer will receive Energy Usage Information, namely <ul style="list-style-type: none"> <li>• Harmonised Downloadable File</li> <li>• Smart Billing</li> <li>• Mandated In-Home Display</li> </ul>
<b>CWI</b> <b>(i.e. the harmonised downloadable file)</b>	Customer Web Interface - The Customer Web Interface is defined as a web-based means of providing interval consumption data in a standard harmonised downloadable format on demand request to Consumers
<b>DCENR</b>	Department of Communications, Energy and Natural Resources
<b>DNO</b>	Distribution Network Operator

<b>Term</b>	<b>Description</b>
<b>DPA</b>	Data Protection Act
<b>DPC</b>	Data Protection Commission
<b>DUoS</b>	Distribution Use of System
<b>E-MDMS</b>	Meter Data Management System for Electricity
<b>End-Use</b>	Any other in-home device to either present data or take instructions from the CAD. May include appliance/end-use control.
<b>ESBN</b>	Electricity Supply Board Networks
<b>ESM</b>	Electricity Smart Meter
<b>G4</b>	G4 Gas Meter Category
<b>G-MDMS</b>	Meter Data Management System for Gas
<b>GP</b>	Guiding Principles
<b>GSM</b>	Gas Smart Meter. Communicates to the ESM over the U-HAN
<b>IHD</b>	In-Home Display - An In-Home Display (IHD) is defined as a device which is located in the Consumer's home; it could be mobile or fixed. It displays information related to the consumption of energy, and cost where practical and useful.
<b>Internet Router</b>	Consumer/Supplier/3rd Party owned router to provide additional data/information/instructions into the home that may apply additional features to the consumption data provided via the ESM/CAD, e.g.: price to cost data presentation.
<b>IVR</b>	Interactive Voice Response
<b>kWh</b>	Kilowatt Hour
<b>MDMS</b>	Meter Data Management System
<b>MGSM</b>	Micro-Generation Smart Meter. Communicates to the ESM over the U-HAN.
<b>MID</b>	Measuring Instruments Directive
<b>MIHD</b>	Mandatory In-Home Display as provided by ESBN and supported for 2 year period after ESM installation. Communicates with the ESM via the U-HAN.
<b>NIAUR</b>	Northern Ireland Authority for Utility Regulation

<b>Term</b>	<b>Description</b>
<b>Non-Utility HAN / Consumer-HAN (C-HAN)</b>	In-Home communication between devices not associated with the ESM but may include use of the same technology/protocol as the U-HAN.
<b>NSMP</b>	National Smart Metering Programme
<b>PAYG</b>	Pay As You Go
<b>PIA</b>	Privacy Impact Assessment
<b>PP</b>	Pre-Payment
<b>PPRxxx</b>	PAYG Requirement reference
<b>SEM</b>	Single Electricity Market
<b>SEMO</b>	SEM Operator
<b>SIHD</b>	Supplementary In-Home Display that may be provided by the Consumer; Supplier; or 3rd Party. Securely paired with the ESM via the U-HAN to take energy data. This may include existing Consumer devices (e.g. TVs, tablets, phones, PCs, etc.)
<b>SLA</b>	Service Level Agreement
<b>Smart Billing</b>	Smart Billing is defined as the presentation of accompanying information detailing energy usage with a Customer's Consumer's energy bill. This information details usage associated with different times and tariffs providing easy to understand comparative data. This aims to show the impact of changes in Consumer behaviour and encourage energy efficiency.
<b>SME</b>	Small to Medium Enterprise
<b>SMP</b>	System Marginal Price
<b>SMS</b>	Short Message Service – used by mobile phone communications
<b>SSM</b>	Steady State Model
<b>TOU</b>	Time of Use – relates to tariffs that are charged at different prices for different periods (e.g. time of day, day of week, month, season, etc.)
<b>TUoS</b>	Transmission Use of System
<b>Utility-HAN (U-HAN)</b>	In-Home communication between the ESM and specific securely paired devices.
<b>WAN</b>	Wide Area Network (a communication method from devices in the field to a central collection point)