



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

**CER National Smart Metering Programme
Regulating the Transition Activities of Market Participants**

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Abstract:

The National Smart Metering Programme is a plan for transforming how electricity and gas retail markets operate. The new systems and processes will provide customers with more accurate bills, better and more accessible information about energy use, and access to new tariffs and services. Consistent with maintaining a focus on delivering benefits for customers, the CER is reviewing and updating consumer policy in order to be ready for these new developments.

This consultation will focus on the various aspects of how the upgrade might best be delivered in practice – and what role, specifically, regulation and guidelines should have in shaping and influencing the plans of industry as they affect customers and the operation of the market. It considers these questions in the context of planning for the rollout of meters and new services, and in the testing and trialling, and readiness activities to be undertaken by market participants.

Target Audience:

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

Related Documents:

- NSMP documentation is available on the CER website (www.cer.ie)

Responses to this consultation should be returned by email (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.

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 smaller business customers 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 customers by 2020 if there is a positive cost benefit analysis.

Consistent with maintaining a focus on delivering benefits for customers, the CER is reviewing and updating customer 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 customers, and the framework for customer protection. The updated customer policy framework needs to provide appropriate levels of support and protection across all types of customers.

The transition to the new arrangements is a complex process involving the replacement of the existing meter inventory with new smart meters, the deployment of a new communications infrastructure that will facilitate automatic reading, the development of new industry business systems and processes, and ultimately the provision of new services to customers. A successful and smooth transition will rely on an industry-wide customer engagement strategy and significant cooperation and coordination amongst industry participants.

This paper considers the regulatory framework appropriate to support activities necessary to deliver and commission the technical platform. It will set the regulatory context for these activities but will not progress the detailed planning and scheduling activities which will be progressed through the existing programme management arrangements.

Context

The NSMP reforms to the services that customers receive are facilitated by ESB Networks and Gas Networks Ireland (GNI) rolling out new meters, and a supporting communications infrastructure, to all residential 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 customers 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 customers. For example, through a display device in the home, or an application on a mobile phone – in turn giving customers 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.
- Third, from a purely technical perspective it will remove the need for a site visit in order to read a meter, or to disconnect or reconnect supply through a meter. The data can be collected remotely, and the instructions can be issued to the meter remotely. Further, it will remove the need for the installation of different 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. The new platform will also create opportunities to improve the quality of network services, and to monitor performance in respect of those services more accurately

Issues for consultation

This document considers the activities necessary to deliver and commission the new technical platform and in particular the regulatory framework that should underpin those activities so as to realise the benefits of the NSMP.

Delivering the technical platform will rely on significant coordination and cooperation amongst the network companies and Suppliers if it is to be delivered economically and efficiently.

The existing regulatory framework governing the activities of gas and electricity undertakers provides a robust framework for the operation and development of the existing retail markets. However, it does not contemplate jointly optimising

activities across gas and electricity so as to minimise the overall costs of a joint programme of work.

As such, it may be that the existing independent regulatory frameworks for gas and electricity are not optimised to achieving an overall economic, efficient and coordinated roll-out.

The CER is concerned to ensure that the regulatory framework for these transitional activities provides the right combination of obligations and incentives to promote a rollout of meters and supporting infrastructure that maximises the potential benefits of the NSMP for consumers and the market.

This document invites views on proposals related to the rollout of new meters and communication infrastructure, the testing and trialling of market processes and the approach to participant readiness

This Consultation document forms part of a wider plan and schedule to mid-2016 for the CER's work on policy to support the Programme. The objective is by that date to have specified all the key policy settings required for successful delivery of the NSMP and effective, proportionate regulation **for customers** of the market arrangements that result. The schedule involves four document "releases" – through the course of which issues will be identified, options for resolution assessed, and decisions proposed and finalised. July 2015 is the second release of documents.

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1 Introduction

1.1 The NSMP

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 proceed to the next phase in considering the rollout electricity and gas smart meters for all residential and smaller business customers was announced in July 2012¹. 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. The CER will re-run the cost-benefit analysis for smart metering in Q3 2016 with revised cost and benefit inputs, including to reflect updated policy settings, in advance of confirming the design to be implemented.

The CER concluded the High Level Design for the NSMP in October 2014². It is now progressing consultations on a suite of policy issues required to give practical effect to that High Level Design. This policy work forms one element of an integrated plan for the NSMP, alongside other work-streams led by ESB Networks, Gas Networks Ireland (GNI), and by electricity and gas Suppliers. There are also CER-led work-streams on Data Protection and Customer Engagement.

1.2 Purpose of this paper

This document forms part of a wider plan and schedule to mid-2016 for the CER's work on policy to support the Programme. The objective is by that date to have specified all the key policy settings required for successful delivery of the NSMP and effective, proportionate regulation **for customers** of the market arrangements that result. The schedule involves four document "releases" – through the course of which issues will be identified, options for resolution assessed, and decisions proposed and finalised. July 2015 is the second release of documents.

The purpose of this paper is to inform the development of the regulatory framework for the transition activities of market participants associated with the delivery and

¹ NSMP Phase 1 Decision CER/12/008

² CER/14/046 (and the associated appendices)

commissioning of the enabling architecture which is necessary to underpin the provision of new customer services.

Specifically, the CER is seeking views to inform the following:

- The development of transitional licence obligations on ESB Networks and Gas Networks Ireland in respect of jointly developing and maintaining an economic, efficient and coordinated plan for the rollout of smart meters and associated communications infrastructure. See Section 3 below.
- Second, the development of transitional licence obligations on:
 - both network companies in respect of jointly developing and maintaining an economic, efficient and coordinated plan for the testing of new market processes, and
 - Suppliers to make reasonable endeavours to comply with the testing plan.

See Section 4 below.

- Third, the development of a participant readiness approach that will provide assurance that market participants have made the necessary changes to systems and processes to support the introduction of new customer services. See Section 5 below.

In order to develop Draft Decisions in an informed and impartial manner, the CER wishes to obtain views from members of the public, the energy industry, customers, customer representatives 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.

1.3 Responding to this paper

The CER invites all interested parties, including members of the public, the energy industry, customer representatives and customers, to comment on the questions raised in this consultation paper by close of business on Wednesday 23 September.

Questions are included in Sections 3, 4 and 5 and the complete set of questions is also reproduced in Appendix A

As the 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

2 Context

2.1 Summary

This section sets out the context for the consultation issues and questions that follow. It:

- Explains how the NSMP will underpin significant reforms to how the retail market operates, and the types of services that can be offered by Suppliers to customers – and the associated timelines, and
- Describes the role of regulation in shaping transition activities necessary to implement the NSMP so as to ensure that the benefits of the NSMP are realised.

2.2 The NSMP and the retail market

The 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 smaller business customers was announced in July 2012³. 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 customers by 2020 if there is a positive cost benefit analysis.

The CER is taking a customer focused approach to the NSMP with the development of customer policy and services in the areas of Time-of-Use Tariffs, Pay-As-You-Go 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.

³ NSMP Phase 1 Decision CER/12/008

2.3 Programme Objectives

The CER has defined statutory duties and has established a number of programme objectives which shape how the benefits of the NSMP are to be realised. Firstly, the CER has statutory duties to protect the interest of customers and to promote competition. Secondly, the NSMP has the following strategic objectives⁴:

- Encourage energy efficiency
- Facilitate peak load management
- Support renewable and micro generation
- Enhance competition and improve customer experience
- Improve network services

Thirdly, the CER has clearly stated that it is its responsibility to ensure that the benefits of the NSMP are realised by ensuring that the benefits are maximised and that costs are minimised.

Achieving these objectives will rely on the commitment of industry stakeholders, development of a robust regulatory framework and an industry-wide customer engagement strategy. The CER has established a consumer engagement workstream which is developing the overall engagement strategy in parallel with the development of the regulatory framework.

This paper considers the regulatory framework appropriate during transition that would best meet these objectives. For the avoidance of doubt, it will set the regulatory context for transition but will not progress the detailed planning and scheduling activities which will be progressed through the existing programme management arrangements.

2.4 Transition and the Role of Regulation

A successful transition is a key element of ensuring the overall success of the NSMP. This is because significant costs will be incurred upgrading business systems and processes, and rolling out new meters and communications infrastructure. At the same time it is during this phase that direct engagement with customers will be progressed so as to realise the benefits of the NSMP. In order for these activities to be delivered efficiently and economically, coordination and cooperation will be required amongst industry stakeholders.

⁴ NSMP Phase 1 Decision Paper CER/12/008, and set out in full in Appendix C.

“Transition” encompasses all of the activities that market participants need to undertake to bring the NSMP into effect. These activities can be considered as those necessary:

- To deliver and commission the new technical platform, and
- To prepare and offer new customer services.

In this paper the regulatory framework to support the activities associated with delivery and commissioning of the new technical platform are considered. The transition arrangements associated with new services such as time of use tariffs are set out separately, and any transitional issues associated with customer protection or regulatory monitoring and reporting will be considered in the next stage of consultation planned for November 2015.

Activities associated with the delivery and commissioning of the new platform are considered in three key areas:

- First, the rollout of smart meters and associated communications infrastructure;
- Second, the testing and trialling of market processes and business systems to support the introduction of NSMP, and
- Third, the development of a participant readiness approach that will provide assurance that the introduction of new services will occur in a smooth and orderly manner.

These three areas are identified at this stage as they are considered fundamental building blocks that will require significant cooperation and coordination amongst industry stakeholders. Whilst, many of these issues can be managed through efficient programme management and governance, it is typical in such energy reform programmes for these arrangements to be underpinned by a proportionate regulatory framework for transition.

This paper considers the regulatory framework that should underpin the activities of market participants during the delivery and commissioning of the enabling infrastructure so as to best realise the overall benefits of the NSMP programme.

2.4.1 The Existing Regulatory Framework

The CER is the economic regulator for gas and electricity markets in Ireland as set out in Section 5 of the Gas (interim) (Regulation) Act 2002 and Section 8 and 9 of the Electricity Regulation Act 1999.

The supply and distribution of gas and electricity in Ireland require permission by licence granted by the CER:

- The supply and distribution of gas requires permission by a licence granted under Section 16 of the Gas (interim) (Regulation) Act 2002 (the Act of 2002).
- The supply of electricity requires permission by a licence granted under Section 14 of the Electricity Regulation Act 1999 (the Act of 1999).
- The distribution of electricity requires permission by a licence granted under S.I. 280 of 2008⁵.

The licences place legal obligations and prohibitions on the activities of the licensees and set a framework for the operation of the electricity and gas markets, customer protection and regulatory monitoring and reporting. These obligations include the requirement to comply with more detailed industry codes (including the Supplier Handbook) and specific codes of practice. These documents set out, amongst other things, the role and responsibilities of each licensee, how market change requests are raised and processed, how disputes are raised and resolved, how charges are levied and revenues recovered.

The regulatory framework underpinning the existing retail market and network operations is therefore comprised of legislation, licences and codes.

2.4.2 Why is transition a special case

Whilst the regulatory framework defines obligations, responsibilities and processes for the normal day-to-day operation of the gas and electricity markets, it may not best serve a period of fundamental market reform.

During a period of fundamental change to the market arrangements the obligations and prohibitions within the existing framework may serve to act as an obstacle to a smooth and efficient transition. This may be because certain prohibitions prevent licensees taking on additional roles and responsibilities, or that existing change management and dispute resolution processes are inappropriate for a project environment.

For example, to facilitate the implementation of the Single Electricity Market (SEM) all affected electricity licences in Ireland and Northern Ireland were amended to include transitional licence conditions. These conditions, which were time limited, put in place obligations on each party to cooperate and generally do what was within their power to prepare for SEM go-live. The conditions recognised the need for participants to coordinate and cooperate across jurisdictions and also

⁵ The licences can be found at www.cer.ie.

recognised the lead role of certain participants with regard to planning, testing and trialling.

To meet the objectives of the NSMP as set out in Section 2.3, greater cooperation is envisaged between GNI and ESB Networks. The existing regulatory framework governing the activities of ESB Networks and GNI does not contemplate ESB Networks and GNI jointly optimising their activities so as to minimise the overall costs of a joint programme of work. Both organisations are regulated in such a way as to be economic, efficient and coordinated within either the electricity or gas sector. As such, it may be that the existing independent regulatory frameworks act are not optimised to achieving an overall economic, efficient and coordinated roll-out.

Similarly, greater coordination and cooperation with electricity and gas network companies and Suppliers will be necessary in order to ensure a smooth and efficient transition to the new arrangements for customers.

This paper therefore considers the regulatory framework appropriate for the transition activities of market participants.

2.4.3 Transition activities considered at this stage

The scale of change required is broad and its impact goes deep into the infrastructure, systems and processes underpinning both gas and electricity retail markets. Delivering the enabling infrastructure involves:

- The nation-wide replacement of existing gas and electricity meters;
- The establishment of new automated metering communications infrastructure;
- The development of new market processes between the ESB Networks, GNI and Suppliers;
- The development of new customer facing systems and processes to facilitate new customer services;
- The testing and trialling of new systems and processes at both a market participant and central market systems level, and
- The monitoring and reporting of participant readiness within overall assurance and readiness framework.

Each market participant will be responsible for the development of their own internal business processes and systems, and it will be for each to decide how best to manage the various issues and risks that will arise.

However, other activities such as Market Process Testing & End-to-End Trialling will require planning, coordination and cooperation across all participants, so that they are delivered efficiently and economically.

The CER considers that at this stage there are three areas where planning, coordination and cooperation are required and where the form of the regulatory framework should be considered:

- Smart Meter & Communication Infrastructure Rollout
- Testing & Trialling, and
- Participant Readiness

In shaping its views in these areas the CER has engaged with industry stakeholders through a series of workshops and bilateral meetings.

3 Smart Meter & Communications Infrastructure Rollout

3.1 Summary

In this section we consider the regulatory framework that should underpin the rollout and commissioning of smart meters and the associated communications network that will enable the launch of new services.

Infrastructure rollout is likely to be one of the most costly elements of the overall investment programme. It is also the phase of the programme requiring the greatest level of cooperation and coordination between the network companies and Suppliers as it will be a significant milestone in the customer's journey to adopting new services.

The objective of this element of the consultation is to help inform the CER in formulating a regulatory framework which will underpin the rollout phase and which best serves the interests of customers whilst striking the right balance between a range of factors including costs and benefits.

3.2 Rollout

3.2.1 Overview

The physical rollout of gas and electricity meters is the responsibility of GNI and ESB Networks, whereas the implementation of the communications network is the responsibility of ESB Networks.

The programme will involve the nation-wide replacement of 2,200,000 electricity meters and 700,000 gas meters. As such, the rollout phase is likely to be one of the most costly elements of the overall investment programme. It is also the phase of the programme requiring significant cooperation and coordination between the network companies and Suppliers, as it will be a critical milestone in the customer's journey to adopting new services.

The features of rollout that will contribute to a successful transition are:

- Engagement with customers to facilitate the early realisation of new services benefits;
- Minimisation of implementation cost across industry stakeholders by being efficient and coordinated;
- Protection of customers and promotion of competition and innovation amongst Suppliers and other third-parties, and
- No compromise to operational safety or network integrity.

An optimal rollout programme will therefore have to consider a range of factors and strike a balance between the cost and efficiency of the rollout whilst considering the impact on customers and the promotion of new services so as to deliver the benefits of the programme. These factors are considered in the next section.

3.2.2 Factors shaping the approach to rollout

In this section factors that impact the realisation of benefits and affecting the overall cost of rollout are considered.

Realising the Benefits of the NSMP

Customer Engagement

The consumer engagement workstream is responsible for developing an overall strategy that is focused on ensuring that consumers engage with the new technology and smart service offerings so that the benefits of the programme are realised.

The rollout phase is a critical element of this success as it is where the programme will physically interact with each customer. Although the customer engagement strategy is still being developed it is conceivable that it may, for example, set some requirements on the installer to either leave information for the customer, explain to the customer what changes have been made or potentially answer customer questions. Depending on the potential scope of such requirements there may be an impact on the rollout programme and in particular how many devices each installer could be expected to deploy per day.

Whether there will be any such requirements placed on installers is still to be determined. However, it is clear that the overall scope and cost of rollout could be influenced by the customer engagement approach and as such this should be a factor considered in the development of the rollout plan.

Early Benefits Realisation

A reduction in and time-shift of energy consumption are important benefits of the NSMP. Achieving these benefits early has a number of advantages as it will have a positive impact on the cost-benefit analysis of the programme and build customer advocacy and positive messages about the value of the programme.

The rollout programme should therefore consider how best to realise benefits early and could do this by facilitating those customers who are actively interested in having a smart meter and who will be more likely to ensure energy saving benefits are delivered. These “early adopters” can help in spreading positive messages about new services and may help to promote wider customer engagement as the rollout develops.

Similarly there may be benefits to be accrued from the application of smart meters to support smart grid services. It may be the case that the Transmission System Operator or Distribution System Operator have views on where such benefits could be accrued and therefore where the deployment programme should prioritise its efforts.

The CER therefore consider “early benefits realisation” to be a factor that should be considered in shaping the rollout plan.

Minimising the cost of rollout

Coordination between network companies

Given the dependency of the new gas meter on the ESB Networks communications infrastructure there will be a need for coordination of the deployment activities of both GNI and ESB Networks in order for rollout to be efficient. For example, the deployment of electricity meters and communications infrastructure should consider the consequences for the phasing and installation of gas meters. Given there are regions where there are no domestic gas supplies there is a risk that the approach for electricity meters could lead to GNI incurring additional costs.

The CER therefore considers that coordination between ESB Networks and GNI to deliver an efficient and economic must be a factor considered in shaping the rollout plan.

Deployment Profiles

The maintenance and replacement of meters is a routine activity for both GNI and ESB Networks. However, the deployment targets to install 80% of electricity meters and the majority of gas meters by 2020, are likely to require their existing internal resources to be supplemented by external installation service providers.

Acquiring qualified resources in suitable timescales may be a challenge given the background that by 2020 close to 200 million smart meters for electricity and 45 million for gas will be rolled out across the EU. Given this scale of deployment there are likely to be pressures on the supply chain and availability of skilled resources.

As such alternative procurement approaches and deployment profiles may have significantly different costs and must be considered in the development of the rollout plan.

Organisational constraints

The approach to rollout will also be shaped by the capability of each organisation to support and implement a programme of this scale in a safe and resilient manner. By overstressing the capability of the network companies there may be a risk of impacting the operation of the networks or to damage the reputation of the NSMP.

The CER therefore considers that the organisational constraints of each network company is a factor that should shape the rollout plan.

3.2.3 Views Invited

Question 1 – Do you think that this is a complete range of factors that should be considered in the development of the rollout plan? If no, please explain why.

3.3 Achieving an optimal plan

Given the range of material factors to be considered in developing a rollout plan, it is not clear that an optimal plan will naturally emerge as there are likely to be different views and priorities from the various stakeholders.

Neither is it clear that the existing regulatory framework would facilitate the development of an optimal plan. For example, whilst both GNI and ESB Networks have licence obligations to be economic and efficient with regard to their own network businesses, the regulatory framework does not conceive of them being “jointly efficient, economic and coordinated” which would be beneficial for the rollout plan.

Similarly, both network companies operate under separate regulatory revenue recovery schemes which may drive and incentivise behaviours which may not necessarily be aligned with the objectives of the rollout phase. These may not be obvious but a better approach may be to acknowledge that the rollout of smart meters and communications infrastructure is an activity which merits its own treatment so that incentives can be designed that explicitly align with the desired outcomes.

It is clear that achieving an optimal rollout plan will be a significant challenge and that it will have to make trade-offs between a number of competing factors.

The CER consider that ESB Networks and GNI are best placed to develop an optimal plan for rollout and consider that the best opportunity for this plan to emerge is to give responsibility to the network companies via transitional licence obligations.

These transitional obligations would give responsibility to jointly develop and maintain an integrated rollout plan which seeks to best balance the factors discussed in Section 3.2.2.

In developing the plan there will undoubtedly have to be trade-offs between these factors and in order to facilitate industry buy-in we would also require the network companies to consult with industry stakeholders and to consider their views in developing the rollout plan. The plan would be approved by the CER and integrated into the overall programme plan and managed through the existing Programme Management Office (PMO) governance arrangements.

In parallel with the development of the rollout plan a revenue recovery approach and package of incentives will be developed by the CER to complement the objectives of the programme and the obligations placed on the network companies.

3.3.1 Views Invited

Question 2 – Do you consider the proposed approach provides the right balance of obligations and incentives to ensure a successful rollout of smart meters? If not, how should this balance be redressed?

4 Testing & Trialling

4.1 Summary

In this section we consider the arrangements necessary to support the implementation of the new market processes required to support delivery of the NSMP. We explain that the existing market governance and change control processes are well understood, and that the necessary market process change requests are already being progressed through the respective governance processes.

We describe the range of system testing that will need to occur and consider whether the existing processes by which gas and electricity market changes are progressed are sufficient given the scale of change necessary to support the NSMP.

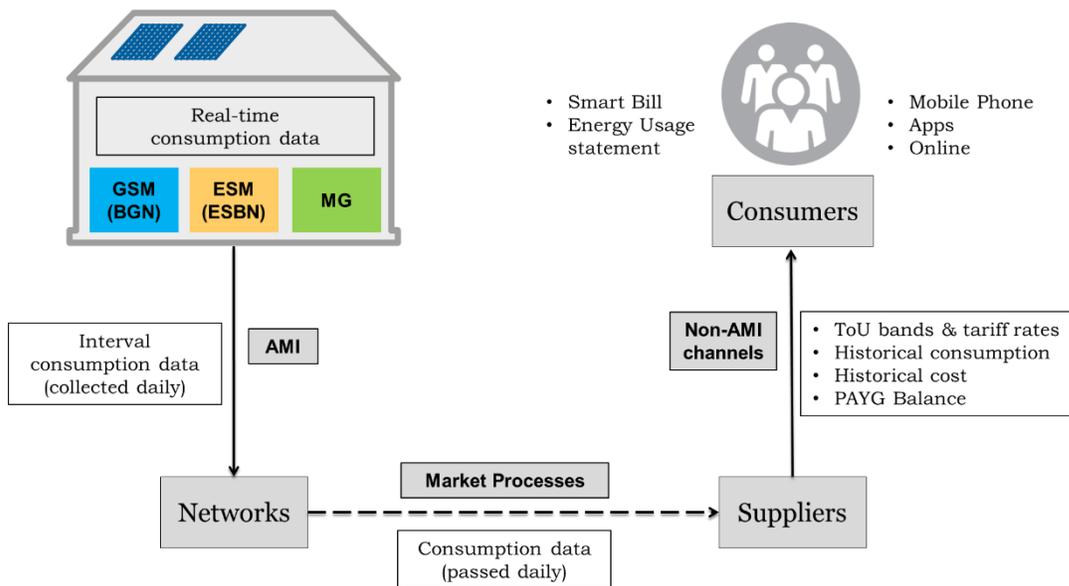
In particular we consider whether any changes to the regulatory framework would be appropriate to underpin the testing and trialling phase so as to best realise the overall benefits of the programme.

The CER has clearly stated that it is its responsibility to ensure that the costs of the NSMP are minimised and that the benefits are maximised. A robust, efficient, coordinated and economic testing and trialling phase is a critical element in ensuring that these objectives are met.

The objective of this element of the consultation is to help inform the CER in formulating a regulatory framework which will underpin the testing and trialling phase and which best serves the interests of customers whilst striking the right balance between costs and benefits.

4.2 Testing & Trialling

In any large scale programme there is always a necessary period of system and process testing and trialling. In the context of the NSMP there are extensive changes to the technical platform and market processes that serve the gas and electricity markets, and which will require significant testing and trialling in order to provide market participants and customers with confidence that they are fit for purpose. The high level design is illustrated in the diagram below:



The rollout and commissioning of smart meters and the associated communications network was discussed in Section 3 and is clearly the responsibility of the two network companies.

In this section we consider the approach to the testing and trialling of the market processes between network companies and, Suppliers and Shippers. The readiness of Supplier systems to support new consumer services will be discussed in Section 5.

4.3 Market Process Testing & Trialling

New systems and processes will be established in the respective gas and electricity markets to facilitate the use of interval data in the provision of new services.

Changes within the gas and electricity market systems are managed by ESB Networks and GNI through the Retail Market Design Service (RMDS) and Gas Market Retail Advisory Group (GMARG) functions. These provide a proven and well understood mechanism for change control and system upgrades. Indeed, the necessary NSMP change requests are being progressed through the existing governance structures and in due course will be progressed for system development.

Processes also exist to manage the release of new system schema and which include robust quality controls and checkpoints. These processes, which are

embedded within the on-going development of both gas and electricity markets, include phases of inter-participant testing that ensure participants are able to operate and interact with new market schema.

However, the scale of system and process change needed to facilitate the introduction of the gas and electricity market changes, as well as the new communications infrastructure, mean that the scope of industry testing and trialling being conducted is greater than normal.

4.4 Proposed Approach

The CER considers the existing testing and trialling framework administered by RMDS and GMARG to provide the right foundation on which to progress the market process changes necessary for NSMP.

Notwithstanding these views it is clear that given the extensive scope of changes and the separate arrangements for gas and electricity, that if testing and trialling is not coordinated this could lead to inefficiency and planning conflicts for Suppliers with gas and electricity portfolios.

As discussed in Section 3, both GNI and ESB Networks have licence obligations regarding the operation of the respective gas and electricity markets. The licences do not anticipate a requirement to coordinate between gas and electricity markets and therefore may inadvertently place a stumbling block in the way of sensible arrangements emerging.

As such the CER considers that it may be appropriate to place a licence obligation on ESB Networks and GNI, for the purposes of transition to the NSMP, to jointly produce and maintain a coordinated market processes testing and trialling plan. There will undoubtedly have to be trade-offs between the testing schedules of electricity and gas and in order to facilitate industry buy-in we would also require the network companies to consult with industry stakeholders and to consider their views in developing the testing and trialling plan.

The plan would be approved by the CER and integrated into the overall programme plan and managed through the existing PMO governance arrangements.

The readiness of these systems is crucial to the delivery of new services as their readiness will assist Suppliers and Shippers in testing operability with their own systems. As such it is important that all Suppliers and Shippers cooperate in the completion of the testing and trialling plan.

The CER therefore considers that it is appropriate to place a licence obligation on Suppliers and Shippers, for the purposes of transition to the NSMP, to use reasonable endeavours to comply with the approved testing and trialling plan.

4.5 Views Invited

Question 3 – Do you consider the proposed approach provides the right balance between the needs of the network companies, Suppliers and Shippers to ensure the successful testing and trialling of market processes? If not, how should this balance be redressed?

5 Participant Readiness

5.1 Summary

In this section we consider the arrangements by which the CER will be assured that market participants are ready to operate within the new market arrangements and commence offering new services to customers.

The launch of new services will depend on the readiness of all participants to operate within the new technical platform and upgraded market processes, and also upon the readiness of internal business systems and processes which will support the delivery of new services.

The potential damage to the programme of one or more parties causing delay or being unable to offer new services in line with any regulatory requirements could have a serious impact on the consumer's willingness to engage with new services and therefore deliver benefits

The objective of this element of the consultation is to help inform the CER formulate a regulatory framework which will underpin market participant readiness and which best serves the interests of customers whilst striking the right balance between costs and benefits.

5.2 Participant Readiness

The previous section has considered the testing and trialling arrangements to prove the readiness of all participants to support the go-live of new market processes. These arrangements will demonstrate each participant's ability to operate within the new schema and process new forms of market message.

This section considers the wider business readiness activities that participants will have to undertake in order to offer and support the introduction of new services in a smooth and orderly manner.

Participant readiness reporting is the means by which assurance will be given to the CER that the cutover to the NSMP can proceed and that participants are sufficiently ready to offer new services.

5.2.1 Business System and Process Changes

In order to be ready participants will need to complete a wide range of business system and process changes that will enable them to operate within the new retail market schema and support the delivery of new services to customers.

These services will include, amongst other things, Time-of-Use Tariffs, Smart Pay as You Go, the provision of a smart bill and energy information statement.

To support these new services significant changes are likely to be required across every key front and back-office function including customer services, customer information systems, marketing, billing, payment channels and accounts. Changes in these functions will require significant investment in staff training, changes to IT systems and internal business processes⁶.

Given the scale of these changes market participants will need to have in place internal change programmes with appropriate resources, governance, budgets and project plans.

5.2.2 Programme Risk

The detailed arrangements for the introduction of Time-of-Use Tariffs and other new services have not yet not concluded. However, the proposed approach includes a window during which new services may be offered but with a backstop date by which mandated transition to Time-of-Use Tariffs must be completed⁷.

Whilst this approach provides a degree of flexibility and allows each party to manage their own change programmes, ultimately each participant will have to be ready to deliver its part of the overall transition.

If one or more parties is not ready to meet the backstop date then there is a risk that the programme's reputation could be damaged resulting in a loss of goodwill and lower levels of customer engagement which would result in a lower take-up of new services and benefit realisation. There is also a risk that one party's delay could result in an overall delay and result in others incurring unnecessary costs.

In order to mitigate these risks a participant readiness function that reports on the status of participants as they prepare for NSMP go-live is proposed.

5.2.3 Existing Assurance Arrangements

These readiness issues and risks are not unique to the NSMP and indeed the existing retail markets have appointed Assurance Bodies that perform similar functions today. These functions provide necessary assurance that participants are ready to operate within new retail market schema and that there will be no unforeseen issues affecting the operation of the market.

These functions use a range of techniques to provide assurance in relation to new market schema including:

⁶ These changes to consumer facing services are also likely to require consequential changes to the Supplier Handbook.

⁷ Rolling out new services – Time-of-Use Tariffs and Smart Pay-as-you-Go CER15/136

- Self-Assessment – in which market participants provide answers to targeted questionnaires;
- Formal Assessment – where the Assurance Body verifies the preparedness of market participants by walking through key aspects with the participant, and
- Inter-Participant Testing – where participants carry out a series of prescribed scenarios.

However, as discussed above the NSMP introduces wider and deeper changes within each market participant and in particular to customer facing services, systems and processes. These appear to be beyond the remit of the Assurance Bodies.

5.2.4 Potential Approach

The CER considers the existing assurance regimes administered by RMDS and GMARG to provide the right foundation for NSMP readiness but that given the scale and depth of change within participant businesses these regimes should be complemented by a wider participant readiness activity that would report regularly on the status of individual participant change programmes.

Whilst the detailed metrics and form of reporting for tracking individual participant readiness will need to be developed we expect similar techniques to those used by the Assurance Bodies would apply. We would also expect them to provide assurance that internal governance, project plans, resource plans, system changes, processes and procedure changes were being adequately progressed.

We envisage a central Participant Readiness function being established as part of the CER's PMO that pulls together readiness status reports from the gas and electricity Assurance Bodies and the reports on status of the individual participant change programmes, to provide an overall assurance status report for both the CER and industry to track.

At this stage we do not envisage that this function would require any changes to the regulatory framework as the existing Assurance Bodies are already facilitated and the additional functions are consistent with the established NSMP programme management and governance arrangements.

5.3 Views Invited

Question 4 – Do you consider the proposed approach provides an adequate framework for providing assurance that market participants have made the necessary business changes support the introduction of new services in a smooth and orderly manner? If not, how should this be redressed?

6 Next Steps

This document forms part of a wider plan and schedule to mid-2016 for the CER's work on policy to support the NSMP. The objective is by that date to have specified all the key policy settings required for successful delivery of the NSMP and effective, proportionate regulation **for customers** of the market arrangements that result.

The schedule involves four document "releases" – through the course of which issues will be identified, options for resolution assessed, and decisions proposed and finalised. July 2015 is the second release of documents, and comprises the following:

Delivered in Document Release 2 – July 2015

Subject	Document type
Rolling out New Services: Time-of-Use Tariffs and Smart Pay As You Go	<p>Proposed Decision – in respect of transition approach for Time-of-Use Tariffs and definition of Smart PAYG</p> <p>Consultation – in respect of supporting guidelines and other related issues</p>
Empowering and Protecting Customers	Consultation
Regulating the Transition Activities of Market Participants	Consultation

These issues will be progressed through analysis of consultation responses for those issues subject to consultation, and through ongoing engagement with a wide range of consumer organisations, market participants and other interested parties. Stakeholders will be updated further on progress through Document Release 3, as outlined below.

Planned for Document Release 3 – November 2015

Subject	Document type
Rolling out New Services: Time-of-Use Tariffs and Smart Pay –As You Go	<p>Decision – in respect of transition approach for Time-of-Use Tariffs and definition of Smart PAYG</p> <p>Proposed Decision – in respect of supporting guidelines</p>
Empowering and Protecting Customers	Proposed Decision
Regulating the Transition Activities of Market Participants	Proposed Decision

In addition, the CER plans to update stakeholders in November on the overall 'road-map' for regulatory change, including to address any new and emerging issues. This will aim to set out, among other things, the plans and timetable for converting policy decisions into relevant regulatory instruments, such as licence obligations, guidelines and codes of practice.

The focus for the first part of 2016 will be on confirming decisions in any outstanding areas, and finalising the planned approach to transposing the decision into the relevant regulatory instruments.

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.

Appendix A will be published alongside the Consultation Paper in Word format.

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 think that this is a complete range of factors that should be considered in the development of the rollout plan? If no, please explain why.			
2	Do you consider the proposed approach provides the right balance of obligations and incentives to ensure a successful rollout of smart meters? If not, how should this balance be redressed?			
3	Do you consider the proposed approach provides the right balance between the needs of the network companies, Suppliers and Shippers to ensure the successful testing and trialling of market processes?			

	If not, how should this balance be redressed?			
4	<p>Do you consider the proposed approach provides an adequate framework for providing assurance that market participants have made the necessary business changes support the introduction of new services in a smooth and orderly manner?</p> <p>If not, how should this be redressed?</p>			

Appendix B – Glossary of Terms

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

Acronym	Term	Definition
-	Assurance Bodies	Organisations appointed by RMDS and GMARG to provide independent assurance of readiness for retail market system changes.
ESBN	ESB Networks	The owner and operator of the national electricity distribution network.
-	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.
GMARG	Gas Market Retail Advisory Group	The governance group that oversees changes to the gas retail market design.
GNI	Gas Networks Ireland	The owner and operator of the national gas network.
-	Network Companies	ESB Networks and Gas Networks Ireland (GNI).
NSMP	National Smart Metering Programme	-
-	October 2014 Decision	The decisions that CER has already made in relation to the high level design of the Time-of-Use Tariffs – 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)
PMO	Project Management Office	The NSMP's central project management function.
RMDS	Retail Market Design Service	A ring-fenced function which provides secretariat services to the electricity retail market.
SEM	Single Electricity Market	The All Island electricity market arrangements introduced on November 1, 2007.
SLA	Service Level Agreement	-
TOU	Time-of-Use Tariffs	A tariff under which the amount paid by a customer for each unit of electricity or gas consumed varies by time of day, week or year.

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 Time-of-Use 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 Customer Experience** - support more timely and efficient change of Supplier process for customers, and promote competition by enabling Suppliers to offer customers:
 - 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 customers from a proliferation of complex tariff products leading to confusion), and
 - d) A more diverse service offering to customers from Suppliers including in the area of prepayment product offerings.
5. **Improve Network Services** - improve services to customers, 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.