

A New Electricity Market for Ireland and Northern Ireland from 2016 - Integrated Single Electricity Market (I-SEM)

Non-Technical Summary

High Level Design Options Consultation Paper

February 2014

1 INTRODUCTION

- 1.1 The wholesale electricity market covering Northern Ireland and Ireland, the Single Electricity Market (SEM), is to undergo significant change. This is a requirement arising from changes to European legislation designed to harmonise cross border trading arrangements across all European electricity markets. The Regulatory Authorities and Government Departments are taking this opportunity to ensure that the revised market will deliver the greatest benefits for consumers on the island of Ireland.
- 1.2 This also represents an opportunity to review and improve the market to take account of the significant developments that have occurred since the creation of the SEM in 2007. These include increased interconnection with the market in Great Britain, increased generation from renewable resources and the potential for more active involvement of the demand side in market arrangements.
- 1.3 By removing barriers and setting harmonised rules for cross border exchanges of electricity the European Union plans to create a competitive, cost effective and transparent market across Europe. In doing so it also seeks to ensure security in the supply of electricity and thereby serve the interests of electricity consumers both now and in the future.
- 1.4 The new wholesale market will be known as the Integrated Single Electricity Market (I-SEM). This recognises the continuity of the existing market while acknowledging the purpose of the new market to integrate more fully with European market arrangements.
- 1.5 This Non-Technical paper provides an outline of the key issues from the Consultation Paper but is not itself issued for consultation.

2 BACKGROUND

- 2.1 The Single Electricity Market (or SEM) came into operation on the 1st November 2007. The objective of the SEM was to establish wholesale electricity trading arrangements which would deliver an efficient level of sustainable prices to all customers, for a supply that is reliable and secure in both the short and long-term on an all-island basis.
- 2.2 The SEM design was developed with the intention of achieving an appropriate balance across a range of strategic objectives including:

- ensuring a secure supply of electricity;
- promoting competition in the electricity market;
- minimising transaction costs for participants and customers;
- fostering the use of renewable and sustainable energy sources; and
- enabling demand-side management.

2.3 Consumers across the island of Ireland have benefited from the introduction of the SEM arrangements. The all island market is in a better position in terms of transparency and cost reflectiveness of prices than would have been the case in the absence of the SEM.

2.4 The SEM arrangements facilitate the efficient scheduling of generators across the whole island, have encouraged greater competition (in both the supply and generation of electricity) and have helped to improve transparency of market trading arrangements.

2.5 However, the EU requirements provide a timely opportunity to review the design of the all island market for electricity given the changes seen since the creation of the SEM which will have been in operation for over nine years by the end of 2016. These changes include:

- increased interconnection capacity with the electricity market in Great Britain, with the potential maximum export capacity from the all island market rising from 80MW to 950MW.
- a changing generation mix, with much greater penetration of wind today, and targets for renewable electricity penetration of 40% by 2020.
- the opportunities for closer integration of the all island Market with the European Internal Electricity Market.
- greater potential for more active involvement of the demand side in the all island market.

2.6 The European Union developed legislation that led to the establishment of a 'European Electricity Target Model' (EU Target Model) which aims to facilitate a pan-European Electricity Market. The associated new rules will be binding on all EU borders by 2014 and the current SEM is not compliant with these rules. Because of the significant changes required to the SEM a two year derogation period has been granted to Ireland and Northern Ireland. The new Integrated

Single Electricity Market (I-SEM) for the all island electricity market must therefore be compliant with the EU Target Model by the end of 2016.

- 2.7 This consultation on developing an Integrated Single Electricity Market (I-SEM) describes four 'High Level Design Options' (see section four) which represent different ways of implementing the EU Target Model. There is no option however not to ensure compliance.

3 GOVERNANCE AND DEVELOPMENT OF HIGH LEVEL DESIGN OPTIONS

- 3.1 The SEM originated from a design developed by two Regulatory Authorities, the Commission for Energy Regulation (CER) in Ireland and the Utility Regulator (UR) in Northern Ireland. The Northern Ireland Department of Trade and Industry (DETI) and the Irish Department of Communications, Energy and Natural Resources (DCENR) developed the associated legislative framework in 2007 under the aegis of which the SEM operates. This included the creation of a governing body, referred to as the SEM Committee, whose membership includes CER, UR and expert independent members.
- 3.2 In order to ensure compliance with the Target Model by the end of 2016, the Governments of Ireland and Northern Ireland charged the SEM Committee in March 2013 with responsibility for revising the SEM so that trading arrangements for the island of Ireland are compliant with EU requirements:
- 3.3 Over the past 10 months a joint CER and UR Market Integration project team has developed four viable options for implementation upon which the SEM Committee is now formally consulting.
- 3.4 Within this consultation each design option is assessed against the principles adopted in creating the existing SEM, namely that the option:-
- ensures **security of supply** of electricity;
 - ensures the market is **stable**;
 - ensures that it is **efficient** and electricity is provided at least cost;
 - that the **cost** of implementation is minimised and it is **practical**;
 - that the design provides for **equity** in allocating costs and benefits;
 - that the design promotes **competition**;
 - that **environmental** concerns are addressed through facilitating renewable generation;
 - that the option is **adaptive** to change; and

- that the option efficiently implements the requirements of the European **Internal Electricity Market**.

3.5 Each option is assessed against the principles that underpinned the creation of the SEM and its compliance with the European Target Model.

3.6 Additionally, and given the importance to participants of the mechanism for capacity remuneration in the current single electricity market, we have included a chapter setting out our current thinking on this matter. It is important to stress that any capacity remuneration mechanism for inclusion with the final high level design option will need to be compatible with the European Commission State Aid rules.

4 SUMMARY OF OPTIONS FOR CONSULTATION

4.1 The Consultation Paper sets out the main features and an initial assessment of the options under consideration.

4.2 The Consultation Paper presents four options for the design of energy trading arrangements, referred to as:

- Adapted Decentralised Market
- Mandatory ex-post Pool for Net Volumes
- Mandatory Centralised Market
- Gross Pool – Net Settlement Market

These vary in their approach to compliance with the EU Target Model but all are believed at this stage to be compliant. Their key features are outlined in the following paragraphs and are shown in diagrammatic form in Annex 1.

4.3 **Option1: The Adapted Decentralised Market** is characterised by an emphasis on allowing market participants greater choice over the markets and timeframes in which they trade energy in order to manage risk. This option relies on market participants carrying out the majority of the required balancing of their electricity generation and demand while the Transmission System Operator assumes a residual balancing role.

4.4 **Option 2: The Mandatory ex-post Pool for Net Volumes** is characterised by some choice for market participants around the market timeframes in which they trade, but ultimately relies on a robust centralised approach to the determination of dispatch of generation which sets prices and volumes.

- 4.5 **Option 3: The Mandatory Centralised Market** emphasises the importance of the Day Ahead Market as the main market for physical trading of energy between market participants. The Intra-Day Market is then the exclusive route for making adjustments. This should ensure a high level of trading in these specific markets. Bidding is based on individual generators submissions, which is intended to enhance transparency in the markets. The arrangements for balancing electricity generation and demand involve relatively simple bids for increases and decreases in output.
- 4.6 **Option 4: The Gross Pool – Net Settlement Market** is characterised by a centralised approach to the determination of dispatch which sets prices and volumes. It is open for market participants to carry out voluntary financial trading in the other timeframes. The trading in the Day Ahead Market and Intra-Day Market determines the physical flows of electricity across interconnectors with Great Britain. This option has a mandatory ex-post pool arrangement.

5 CONSULTATION PROCESS AND TIMEFRAME

5.1 Responses to the Consultation Paper are requested by the 4 April 2014. Following a review of the responses to this paper the SEM Committee will publish a Proposed Decision Paper on the preferred option on the 6 June. This paper will contain an initial quantitative assessment of the preferred option and will be subject to a further 4 week consultation period closing on the 7 July. The SEM Committee will then consider all responses and any further work carried out by the project team and will publish its final decision on the new I-SEM High Level Design in August 2014.

CONSULTATION	START DATE	END DATE
High Level Design Options	5 th February 2014	4 th April 2014
Design Option-Proposed Decision Paper	6 th June 2014	7 th July 2014
Publication of Final I-SEM High Level Design for 2016	Not Applicable	August 2014

6 NEXT STAGES OF MARKET INTEGRATION PROJECT

6.1 It is important to note that this consultation focuses on a High Level Design. Detailed elements that are also necessary mechanisms for any market will be addressed in the next phase of the Market Integration Project.

6.2 The project team have already commenced discussion with the system operator in relation to the more detailed development and implementation of the Integrated Single Electricity Market (I-SEM) market arrangements. Information on this and proposals for engagement with market participants will be published over the coming months.

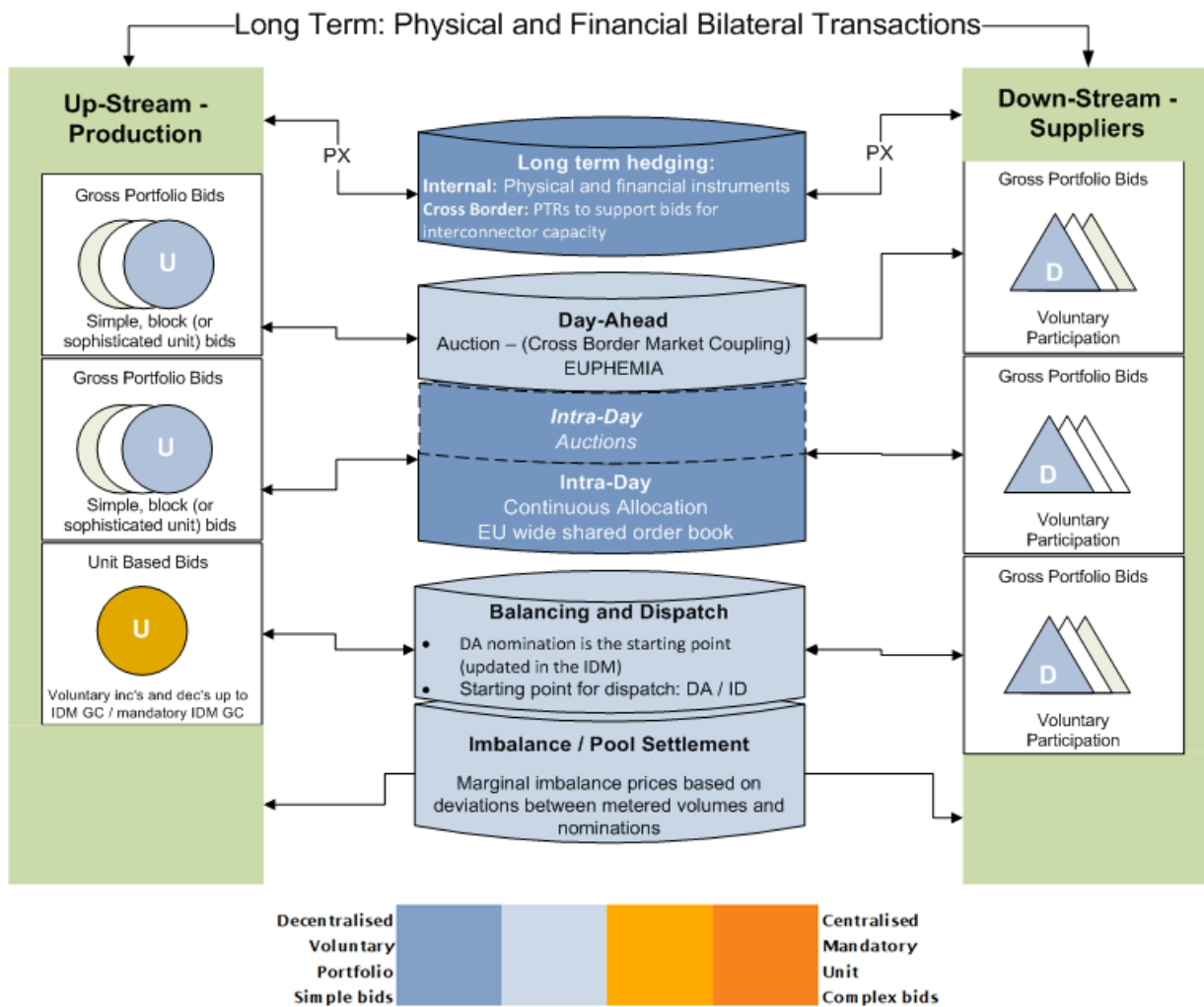
6.3 The full Consultation Paper setting out the options in more detail and initial assessment of these options is published on the all island web site at:

<http://www.allislandproject.org/>

ANNEX 1

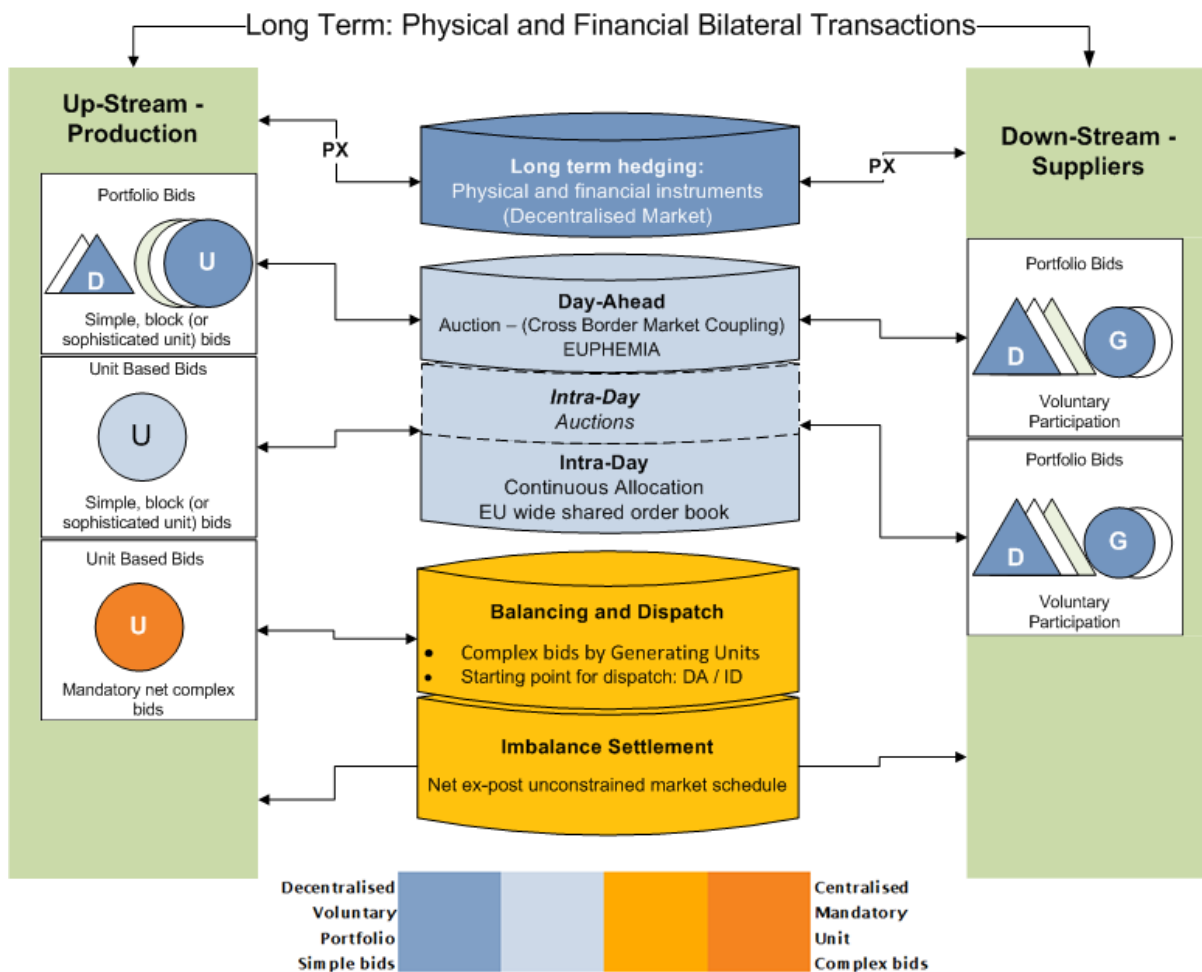
- Annex 1 sets out in diagrammatic form the main elements of the four options for the new market. Their key features are colour-coded, ranging from blue for design elements that are more decentralised to orange for more centralised arrangements.
- Figure 1 sets out the arrangements for Option 1 which is characterised by an emphasis on allowing market participants greater choice over the markets and timeframes in which they trade energy. Further detail is set out in section 6 of the Consultation Paper.

Figure 1 Adapted Decentralised Market



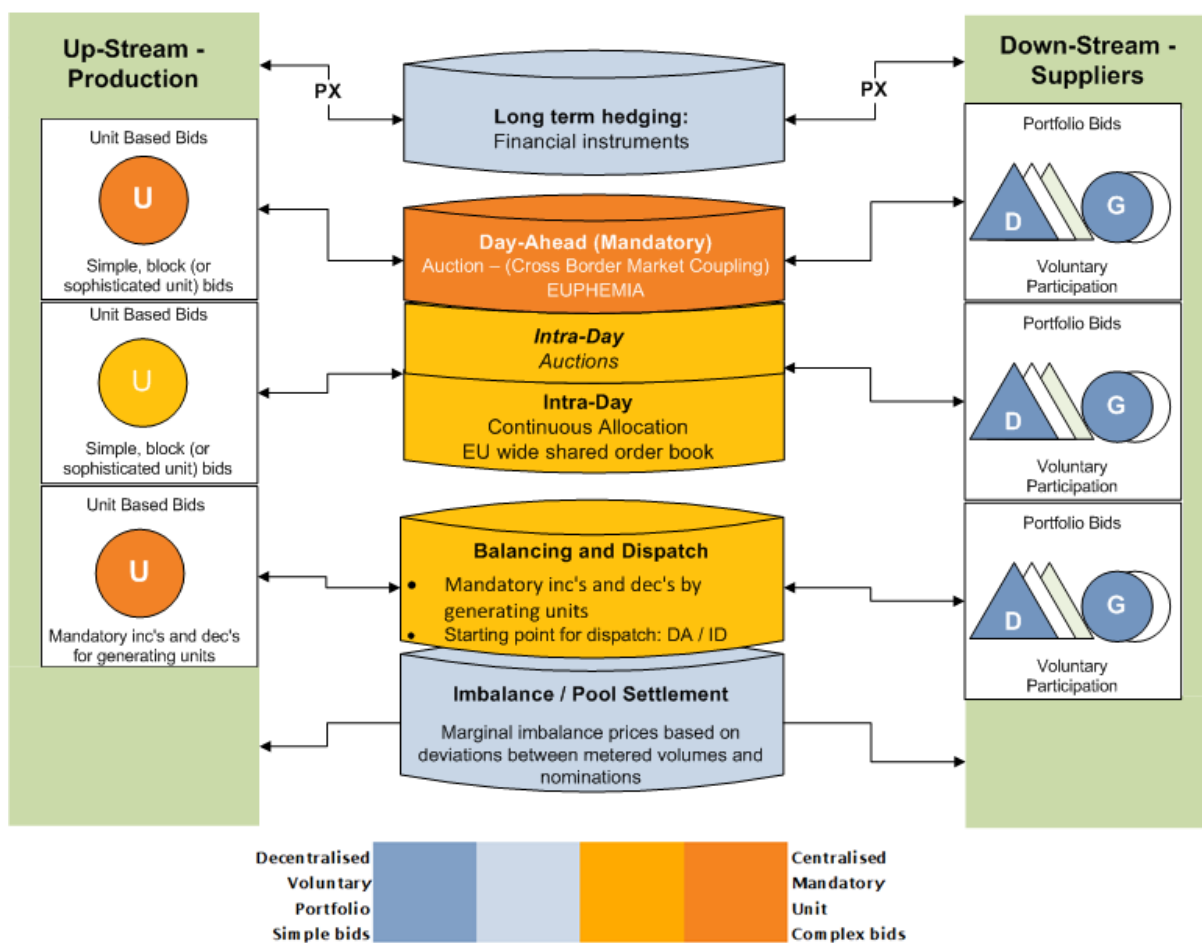
3. Figure 2 sets out the arrangements for Option 2 which is characterised by some choice for market participants around their trading but ultimately relies on a centralised approach to determining prices. Further detail is set out in section 7 of the Consultation Paper.

Figure 2 Mandatory ex-post Pool for Net Volumes



4. Figure 3 sets out the arrangements for Option 3 which is characterised by mandatory participation by market participants in the day ahead market and into the balancing mechanism. Further detail is set out in section 8 of the Consultation Paper.

Figure 3 Mandatory Centralised Market



5. Figure 4 sets out the arrangements for Option 4 which relies on centralised, pool-based determination of prices and volumes. Further detail is set out in section 9 of the Consultation Paper.

Figure 4 Gross Pool- Net Settlement Market

