



SEM Committee Annual Report 2012

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FOREWORD BY THE SEM COMMITTEE

The Single Electricity Market (SEM) is the all-island wholesale electricity market covering Ireland and Northern Ireland, which has been operational since November 2007. The SEM is governed by the SEM Committee (SEMC). The SEMC currently consists of six members, two representing the Commission for Energy Regulation in Ireland, two representing the Utility Regulator in Northern Ireland and two independent members. The SEMC is pleased to present the SEM Annual Report for 2012. The two regulatory authorities advanced a significant body of work in 2012. The developments in various work-streams are detailed in this report.

The SEMC believes the market has worked well since its introduction in November 2007 and continues to deliver benefits to consumers through the use of efficient generation plant to meet demand across the whole island. The SEM model of setting prices in a transparent and cost reflective manner is not only assisting to promote competition and attract new investment, it has also resulted in improvements in the availability of generation plants.

In 2012 the MMU continued to review the market on an ex-post basis investigating the exercise of market power. During 2012 the MMU actively engaged in a number of discussions with several market participants regarding the interpretation of the Bidding Code of Practice and several investigations have been conducted and concluded in this period.

As expected electricity prices are higher over the winter months when electricity demand is high and fuel is usually more expensive. Gas fired units contribute the largest share of the generating load (approximately 60%) and therefore the variations in the international fuel prices have a significant impact on the System Marginal Price (SMP). During 2012 the SMP increased compared to 2011 largely in response to increases in wholesale gas prices. In addition the daily price profile and broad trends in SMP have followed the broad movements in balancing prices published by Elexon for the British Electricity Trading and Transmission Arrangements (BETTA). These observations provide a level of assurance that there is no evidence to suggest manipulation of prices in the SEM.

2012 saw increased flows via following the return of the Moyle following the faults that caused its outage for the second half of 2011. 2012 also saw an incident of a negative SMP price for one period on 5 January 2012. This was a price floor event i.e. low demand with most plants at minimum generation. During 2012 fuel prices were generally aligned with electricity prices, with the market carrying through any price changes from these fuel markets into the wholesale electricity price. The SMP average for 2012 was €63.20/MWh.

In 2012 the SEMC published its policy decision paper on Market Power and Liquidity. This confirmed that the SEMC would maintain the Bidding Code of Practice, Market Monitoring Unit and Directed Contracts as key aspects of the market power mitigation strategy within the current SEM (prior to any change for the "Target Model" – see later). If the spot market becomes significantly less concentrated in the future, the Committee will review these market power mitigation measures. It also decided not allow ESB vertical (generation-supply) integration for now, but allow the horizontal integration of ESB generation units, i.e. of ESB PG and ESBI (Synergen and Coolkeeragh), given the low market power risks involved.

A key objective for the SEMC is to drive the evolution of the SEM to align with neighbouring markets. At an EU level, there are a variety of developments taking place to ensure that potentially all European electricity markets harmonise their rules to allow for further integration between markets over the coming years. The SEMC committed to European integration in line with the Target Model set out in EC Directives and detailed in the ACER

Framework Guideline. The objective for SEMC is to implement the Target Model in a manner which provides benefits for consumers and is cost effective. This will be a significant challenge and will require a transition to new market arrangements by the relevant target date. To this end, the SEMC's Consultation Paper *"Proposals for Implementation of the European Target Model for the Single Electricity Market"* (SEM-12-004) was published on 24 January 2012. The Consultation Paper set out the description of the SEM, the European context and proposed Target Model as well as evolutionary and revolutionary options for Target Model Implementation and legal and governance issues. The SEMC will continue to progress the Market Integration project and to reach decisions on the next steps in cooperation with the respective Government Departments, DCENR and DETI.

The SEMC is encouraged by the continued Investments in the SEM. This is evidenced by increased interconnection (in the form of the East West interconnector), the developments within the France-UK-Ireland (FUI) region and the emerging EU blueprint for a single European electricity market. The East-West interconnector was completed in Quarter 3 2012 and with a capacity of 500MW will allow flows in both directions between Ireland and Great Britain. Both Governments have set a target of achieving 40% generation from renewable sources by 2020. The majority of this is likely to be from wind generation and the amount installed on the island has been increasing steadily and continued investment will be required to meet the 2020 target. These new investments will further contribute to the reduction of wholesale prices through increased competition and enhance security of supply for consumers.

The increased emphasis on renewable energy and the need to maintain a sustainable, secure power system together with a wholesale market which meets key SEM objectives are key areas recognised by the SEMC. The SOs have established a programme of work entitled *"Delivering a Secure Sustainable Electricity System (DS3)"* which includes enhancing the portfolio performance, developing new operational policies and system tools to efficiently use the plant portfolio to the best of its capabilities, and regularly reviewing the needs of the system as the portfolio capability evolves.¹ A consultation was held in June 2012 on the new services required for the system in 2020. EirGrid and SONI held a System Services Forum in Dundalk in July 2012 to inform industry and discuss the issues facing DS3 implementation. A further consultation was held in December 2012 and EirGrid and SONI were requested to provide more modelling information that supported the approach and figures presented in the paper. The SEMC continues to work with System Operators (SOs) to identify necessary work arising regarding the impact of increased renewables, specifically wind, on the all island power system.

The SEMC acknowledges the continued difficult economic climate and challenges to be faced by consumers and the energy sector as a whole. In this regard, the SEMC remains focused on its objectives including delivery of an efficient level of prices to all customers, enhancement of security of supply and promotion of the development of a fair, efficient and competitive market throughout the island.

The SEMC will continue to oversee the development of the market over the coming years. It will balance the need for the market to change and evolve over time, with the provision of a high degree of regulatory certainty to the market. It is of the view that the longer term strategic development of the SEM should be based on the SEM objectives and the key external drivers impacting on the market, including increased intermittent generation, increased interconnection and moves toward regional integration of electricity markets across Europe.

¹ <http://www.EirGrid.com/operations/ds3/ds3programmeoffice/>

1 ROLES AND RESPONSIBILITIES OF THE SEM COMMITTEE

1.1 LEGAL ROLE OF SEM COMMITTEE

The SEM Committee (SEMC) is the decision making authority on all Single Electricity Market (SEM) matters. The principal objective of the SEM Committee is to protect the interests of electricity consumers by promoting, when appropriate, effective competition in relation to the sale and purchase of Electricity within the SEM².

In Ireland, the relevant legislation is the Electricity Regulation (Amendment) (Single Electricity Market) Act 2007 which provides for the establishment and operation of a single competitive wholesale electricity market on the Island of Ireland. Similar legislation providing a legal framework for the establishment and operation of the SEM in Northern Ireland is referred to as the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007. These legislations required the establishment of SEM Governance in the form of a SEM Committee.

The primary function of the SEMC is to determine the need to exercise relevant functions of the Commission for Energy Regulation (CER) or Northern Ireland Authority for Utility Regulation (The Utility Regulator) in relation to SEM matters.

1.2 MEMBERSHIP OF THE SEM COMMITTEE

The Minister for Communications, Energy and Natural Resources and the Minister of Enterprise, Trade and Industry appoint the members of the SEMC. In 2012 the SEMC members were:

- Two representatives of the Commission for Energy Regulation (CER), Dermot Nolan and Garrett Blaney;
- Two representatives of the Northern Ireland Authority for Utility Regulation (The Utility Regulator), Alan Rainey and Shane Lynch; and,
- One Independent Member, Odd Håkon Hoelsæter; and one Deputy Independent Member, David Newbery; both appointed on 29 November 2012 and replacing Ignacio Perez Arriaga and José Sierra López respectively.

The legislative framework provides for equality of voting between the RAs. The SEMC, therefore, consists of three voting blocks; one vote for the independent voting block (representing the Independent or Deputy Independent Member, as the case may be), one vote for the CER voting block (representing the two CER SEMC Members) and one vote for the Utility Regulator voting block (representing the two Utility Regulator SEMC Members).

² <http://www.legislation.gov.uk/nisi/2007/913/article/9?view=plain>

1.3 GOVERNANCE STRUCTURE

In accordance with legislative requirements, the SEMC has established rules and procedures in relation to its meetings and decision making process (including voting arrangements) and the joint regulatory working arrangements for the RAs that support the decision making by regulatory authorities. These governance arrangements assist the SEMC to carry out its legal functions and duties.

As part of the SEMC's governance arrangements, the Oversight Committee was given delegated authority to carry out certain operational functions on behalf of the SEMC. The Oversight Committee deals with, among other matters:

- Implementation of SEMC policy;
- Management of all SEMC operational matters;
- Management of the Operational Work Streams and other SEM work;
- Reviewing policy matters to be decided by the SEMC; and,
- Developing SEM work plans and budgets for the SEMC.

The Oversight Committee is a subcommittee of the SEMC. It consists of senior staff members from both RA offices.

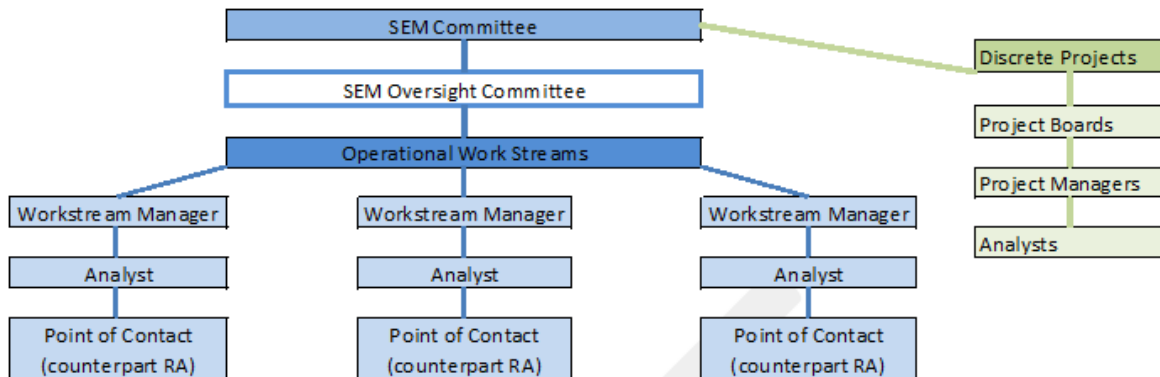


Figure 1: New SEM Governance Structure

The structure for 2012 consisted of four operational work-streams, namely the Trading and Settlement Code; Market Monitoring; Market Modelling and SEMO Regulation; as being key SEM regulatory functions for which a designated Manager, was assigned. Each manager reported to the Oversight Committee in respect of his work-stream. This manager had responsibility for the planning, management and delivery of outputs of the work-stream and co-ordinated with the relevant point of contact within the counterpart RA.

As mentioned above, the RAs also established joint project teams or special project teams, to progress work that did not strictly fall under the work-streams mentioned above or that required special focus. These projects included: Market Integration, Dispatch and Scheduling together with matters relating to Trading and Settlement Code, Ancillary Services and the Bidding Code of Practice, Review of Locational Signals in the SEM (GTUOS and TLAFs), Enduring Fuel Mix Disclosure Methodology and review on Market Power and Liquidity.

The paragraphs below provide an overview of the operational work-streams and joint projects.

1.3.1 TRADING AND SETTLEMENT CODE

The Wholesale Electricity Markets team, based in Dublin at the CER, oversees the SEM Trading and Settlement Code (the Code) which sets out the rules and procedures concerning the sale and purchase of wholesale electricity in Ireland and Northern Ireland. The SEM rules, and the market development of these rules, are managed by this team on behalf of the SEMC.

1.3.2 MARKET MONITORING UNIT

The Market Monitoring Unit (MMU), which is based in Belfast at the Utility Regulator, is responsible for reviewing the behaviour in the market on an ex-post basis. The MMU is responsible for investigating the exercise of market power, monitoring the compliance of market participants with the bidding code of practice and other market rules and reviewing prices reported in the market.

The MMU also manages the process for determining the revenues arising from Capacity Payments Mechanism and policy developments in this area.

1.3.3 MARKET MODELLING GROUP

The Market Modelling Group (MMG), which is based in Dublin at the CER, is responsible for developing and/or monitoring various Contracts for Differences for participants in the SEM. Specifically the MMG sets the price, quantity and supplier eligibility of Directed Contracts, which is a key part of the SEMC's market power mitigation strategy, while it also takes an active role in encouraging the development of the Non-Directed Contracts market. In addition the MMG provides market forecasts of the SEM to the RAs, the majority of which is short-term (one to two years) forecasting.

1.3.4 SINGLE ELECTRICITY MARKET OPERATOR REGULATION

This unit, which is based in Belfast at the Utility Regulator, oversees the regulation of the Single Electricity Market Operator (SEMO). SEMO, which administers the market functions of the SEM, is managed as a contractual joint venture between EirGrid and SONI and is licensed by the RAs. This unit is responsible for approving SEMO's revenue and tariffs, overseeing SEMO's licence compliance and approving projects undertaken by SEMO.

1.3.5 SEM RELATED - JOINT PROJECTS

The RAs also established a number of joint project teams to advance work that needed to be progressed with an All-island approach but did not strictly fall under the Joint Management Units mentioned above. These projects included:

- European Market Integration
- DS3 Program
- All Island Harmonised Ancillary Services (HAS) and Other System Charges (OSC)
- Review of Locational Signals in the SEM (Generator Transmission Use of System Charges - GTUoS and Transmission Loss Adjustment Factors - TLAFs)
- Fuel Mix Disclosure Calculation Methodology

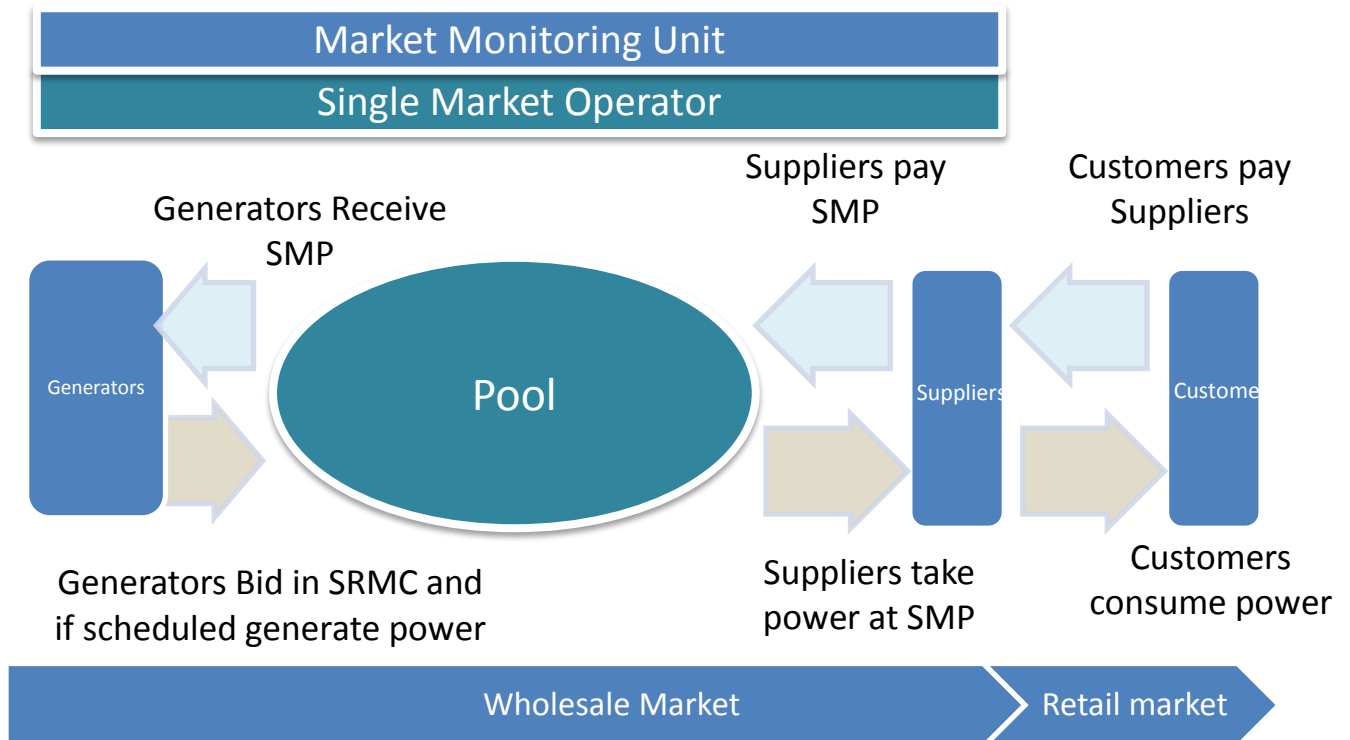
2 OVERVIEW OF THE SINGLE ELECTRICITY MARKET

The SEM is designed to provide for the least cost source of electricity generation to meet consumer demand at any one time across the island, while maximising long term sustainability and reliability. Overall the SEM facilitates the running of the cheapest possible generators, determined by the merit order of generation bids, to meet customer demands across the island.

The SEM includes a centralised all-island gross mandatory pool (or spot) market. In this pool electricity is bought and sold through a market clearing mechanism whereby generators bid in their marginal cost and receive the System Marginal Price (SMP) for each trading period for their scheduled dispatch quantities. Generators also receive separate payments in the form of capacity payments for the provision of available generation and constraint payments for the difference between the market schedule and the system dispatch. Suppliers purchase energy from the pool paying the SMP for each trading period along with capacity costs and system charges. The SEM pool is illustrated below, while the SEM rules are set out in detail in the Trading and Settlement Code.

This pool was developed as part of a market power mitigation strategy to prevent abuse or distortion of the SEM. The major focus of this strategy comprised the imposition of Directed Contracts on generators with significant market power, the imposition of a licence condition on generators to adhere to a bidding code of practice and the establishment of the MMU to monitor participants' bidding behaviour.

Figure 2: The Single Electricity Market



2.1 SEM OUTCOMES IN 2012

In the SEM, in a Trading Period all Generator Units receive and all Supplier Units pay the same price for electricity, the System Marginal Price (SMP). The half hourly SMP is made up of two components:

- Shadow Price: a component of the SMP for each Trading Period which reflects cost of the marginal MW required to meet demand.
- Uplift: a component which is calculated to reflect the Start-Up and No Load Cost element of Schedule Production Cost for relevant Generator Units.

There are several prices in the SEM that are reviewed and monitored by the SEM Committee's Market Monitoring Unit.

In 2012, the System Marginal Price (SMP) in the SEM rose 2%, on average, against the 2011 SMP. This rise is due to various factors including gas prices, which increased 13% on average, counteracted with increased average capacity margin³ of 8%. This increased capacity margin was driven by increased interconnector availability and a 2% average fall in demand.

2012 Average Daily Profile

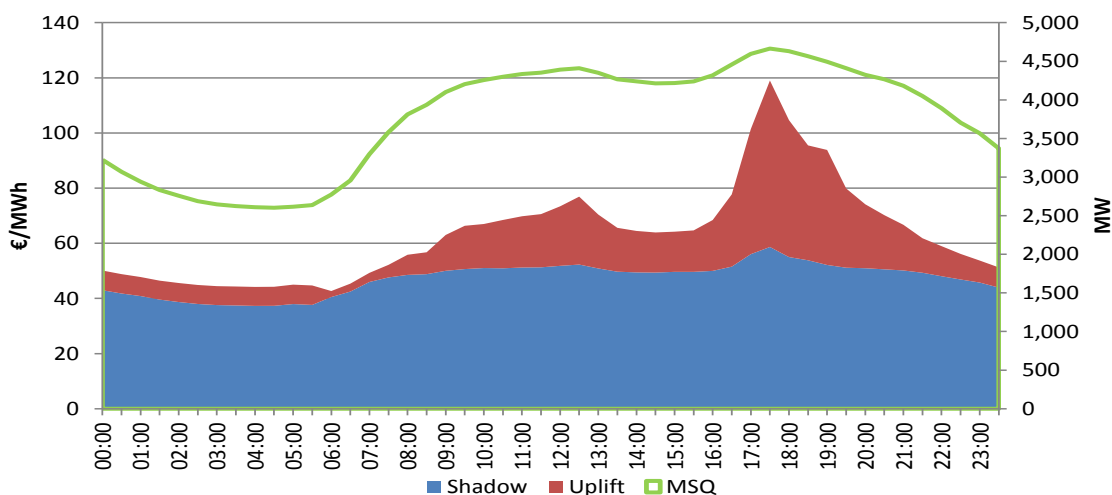


Figure 3: 2012 Average Daily Profile

- The Shadow Price (blue area, measured on the left hand axis);
- Uplift (red area, measured on the left hand axis). The top of the red area represents the SMP at that time;
- The Load profile over the day in megawatts (MW) (green line, measured on the right-hand axis);

³ The capacity margin is calculated by subtracting demand from the total available capacity on a half hourly basis.

Duration Curves

The load duration curve below illustrates the percentage of time that load, or system demand, (measured in megawatts) is above a certain level.

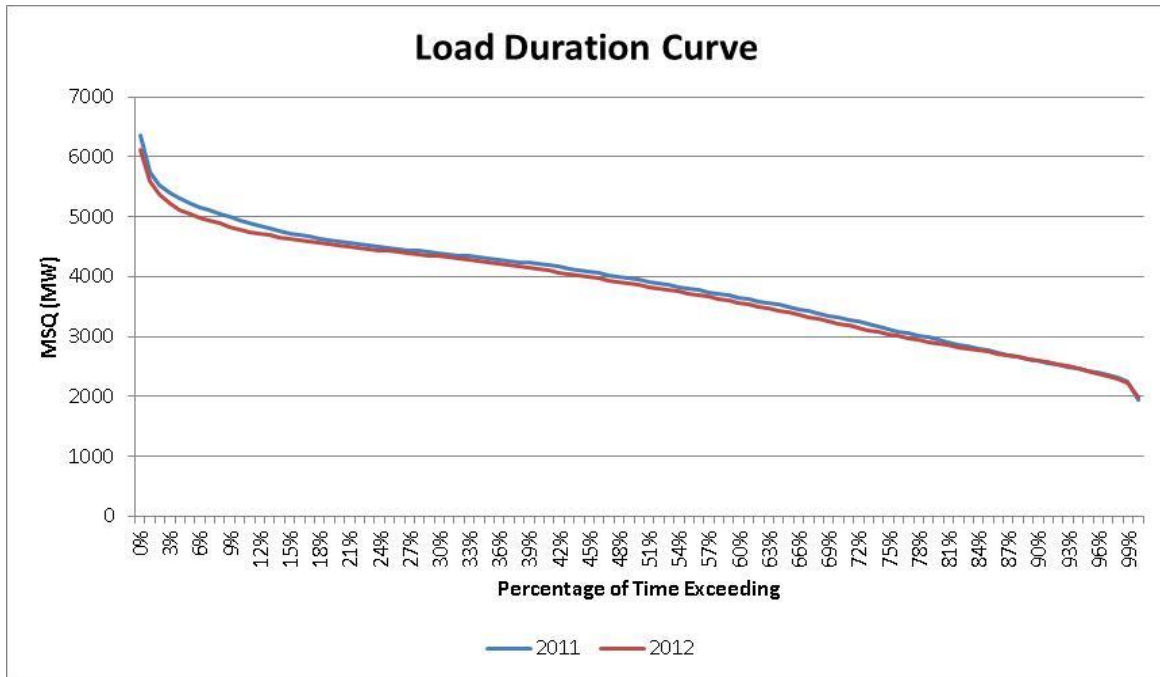


Figure 4: Load Duration Curve for Years 2011 and 2012 of the SEM.

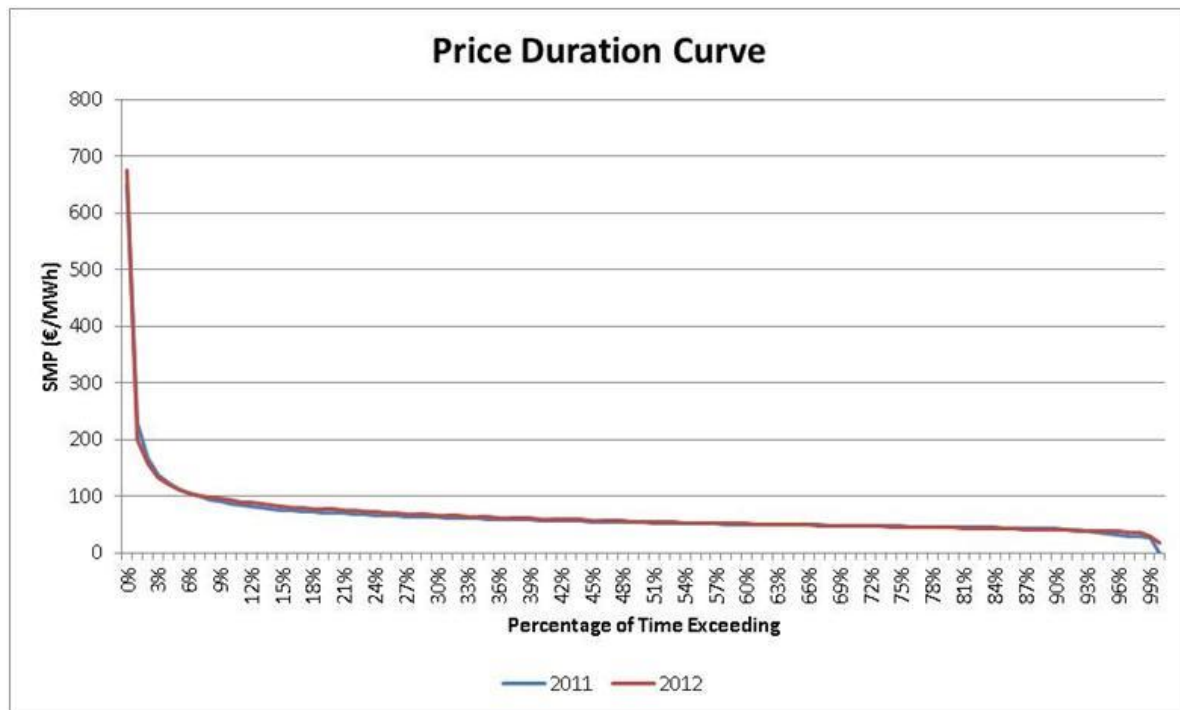


Figure 5: Price Duration Curve for Years 2011 and 2012 of the SEM.

The chart above helps illustrate the extent of price spikes in the SMP. It shows a sharp descent at first then stabilising into a smooth descent from around the 6% mark in 2011 and the 8% mark in 2012. In 2011 just over 7% of half-hourly price outcomes fall above €100/MWh and about 61% half-hours yielding values above €50/MWh while in 2012 7% prices fall above €100/MWh and 62% are above €50/MWh. In 2012 there was an incident of a negative SMP price for one period on 5 January 2012 at 05:30. This was a price floor event – low demand, most plants at minimum generation.

The table below shows the top ten incidences of SMP in 2012 and the split between the shadow price and uplift at that time.

Full Date	Period	SMP (€/MWh)	SHADOW (€/MWh)	Uplift (€/MWh)	MSQ (MW)
24/04/2012	17:00	676	80	595	4,757
17/10/2012	19:00	657	84	573	5,159
25/11/2012	12:30	518	221	296	4,539
06/12/2012	09:30	494	55	438	4,849
24/10/2012	18:30	488	60	428	5,190
21/10/2012	19:00	478	53	425	4,429
18/10/2012	19:00	472	56	416	5,110
24/08/2012	12:30	465	53	412	4,445
11/11/2012	17:30	452	98	355	4,990
20/03/2012	19:00	449	50	399	4,970

Table 1: The top ten incidences of SMP in 2012

Significant changes in the margin are directly related to changes in demand and the availability of plants. In the majority of the above top ten incidences a negative correlation can be seen when comparing the Margin and SMP for the same period in the SEM. In other words, demand has increased causing SMP to rise, while the margin reduced reflecting the decrease in excess capacity available.

Typically, the highest SMPs are returned when there is a period of high demand, or low margin, and a peaking unit may be required to turn on for one or two periods. This means that their start costs must be recovered over a very short time period which can result in very high uplift.

The long term trend of SMP has largely followed trends in fuel prices and has increased in periods where the margin between demand and available capacity has been tight. Typically, electricity prices are higher over the winter months when electricity demand is high and fuel is usually more expensive. Gas fired units contribute the largest share of the generating load and therefore the variations in the gas price had a significant impact on the SMP.

During 2012 fuel prices were generally aligned with electricity prices, with the market carrying through any price changes from these fuel markets into the wholesale electricity price. The SMP average for 2012 was €63.20/MWh.

Full Date	Period	SMP (€/MWh)	SHADOW (€/MWh)	Uplift (€/MWh)	MSQ (MW)
05/01/2012	05:30	-48	-100	52	2,859
15/01/2012	04:30	0	0	0	2,620
15/01/2012	05:00	0	0	0	2,609
15/01/2012	05:30	0	0	0	2,604
15/01/2012	06:00	0	0	0	2,651
15/01/2012	06:30	0	0	0	2,690
05/01/2012	03:00	12	0	12	2,854
05/01/2012	03:30	12	0	12	2,828
05/01/2012	04:00	12	0	12	2,819
22/11/2012	02:00	14	14	0	2,708

Table 2: The lowest ten incidences of SMP in 2012

These incidences of SMP in 2012 occurred when the system margin (the level of available capacity above demand) was relatively ample as would be expected around 3:00 to 5:30 in the morning. On these occasions demand was being met by units such as hydro that have zero incremental cost hence the SMP being €0/MWh.

The figure below shows the average daily SMP over the five year period to 31 December 2012.

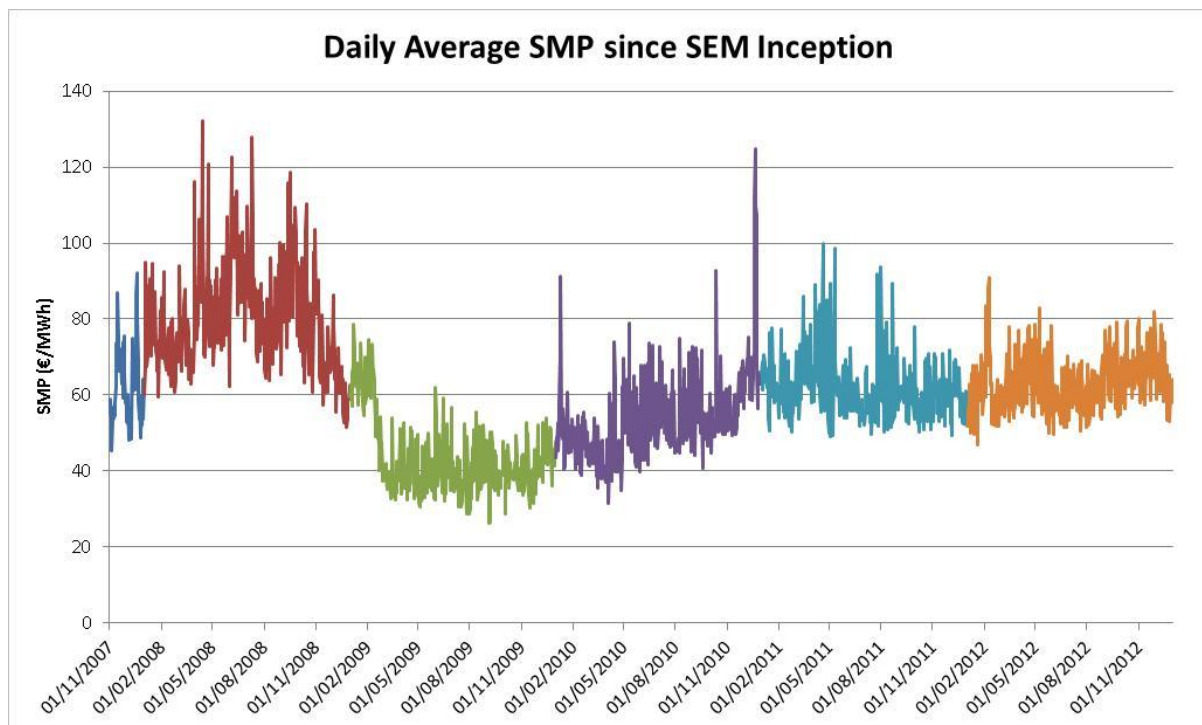


Figure 6: Daily Average SMP since the start of the SEM.

Since October 2008 the SMP has fallen from over €80/MWh to under €40/MWh for most of 2009, averaging over €50/MWh for 2010 and steadily rising to an average of €62/MWh in 2011. This price was maintained in 2012 with an average of €63/MWh.

The following figure looks at the monthly price trends since the start of the SEM.

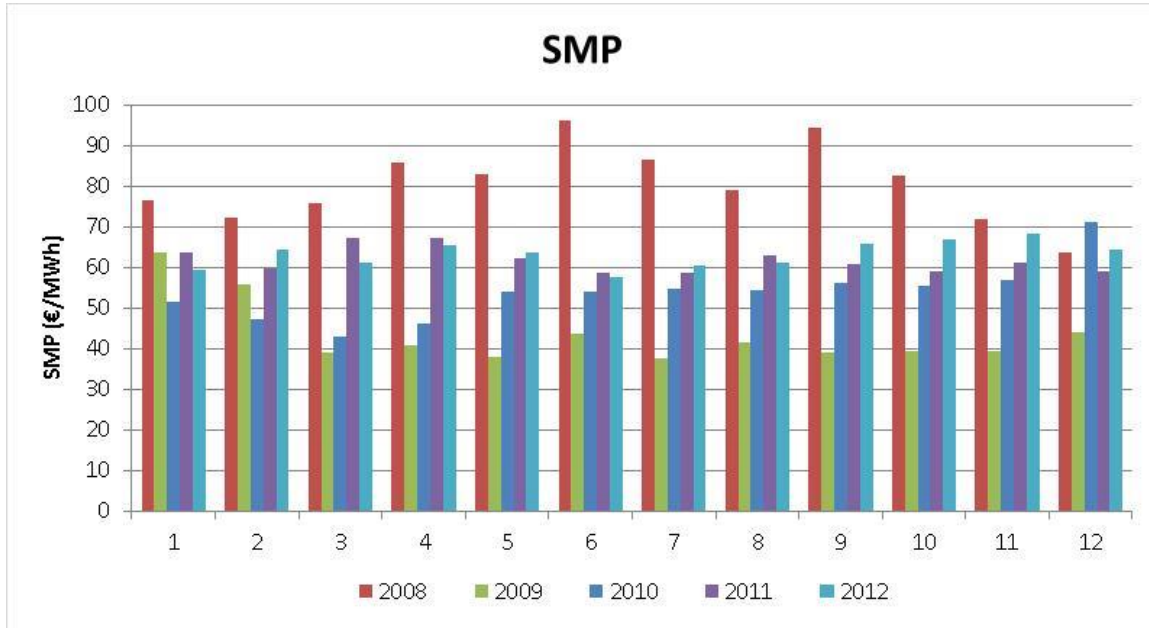


Figure 7: Monthly Average SMP Price History in the SEM

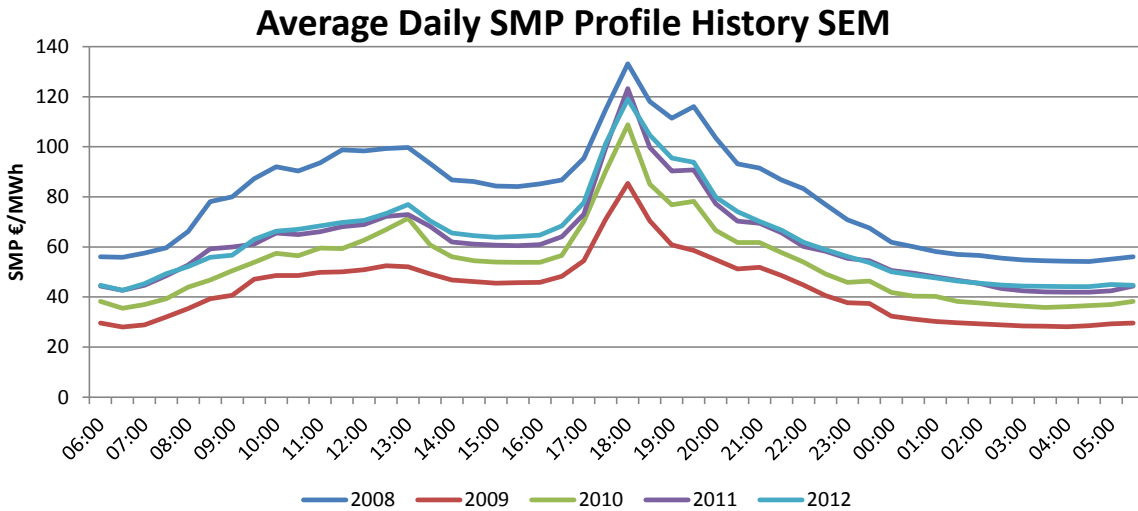


Figure 8: Average Daily SMP Profile History in the SEM

Figure 8 shows that the 2012 daily price profile is moving back to 2008 levels. The long term trend of SMP has largely followed trends in fuel prices and has increased in periods where the margin between demand and available capacity has been tight.

In summary the demand weighted average SMP for 2012 was €67/MWh, with a peak of €676/MWh occurring on 5 January 2012. The SMP has exhibited the following tendencies:

- The highest SMP points during the day tended to coincide with the highest demand periods during the day.
- SMP has tended to rise and fall across the study period in broad alignment with rises and falls in the key underlying fuels (most notably gas) and the carbon price.
- SMP has tended to rise and fall inversely with the Capacity Margin over the year. In other words, as the surplus capacity above what is required to serve the demand tightened, the SMP tended to rise (and vice-versa).

The daily price profile and broad trends in SMP over the study period have shown a tendency to follow the broad trends in balancing prices published by Elexon for the British Electricity Trading and Transmission Arrangements (BETTA).

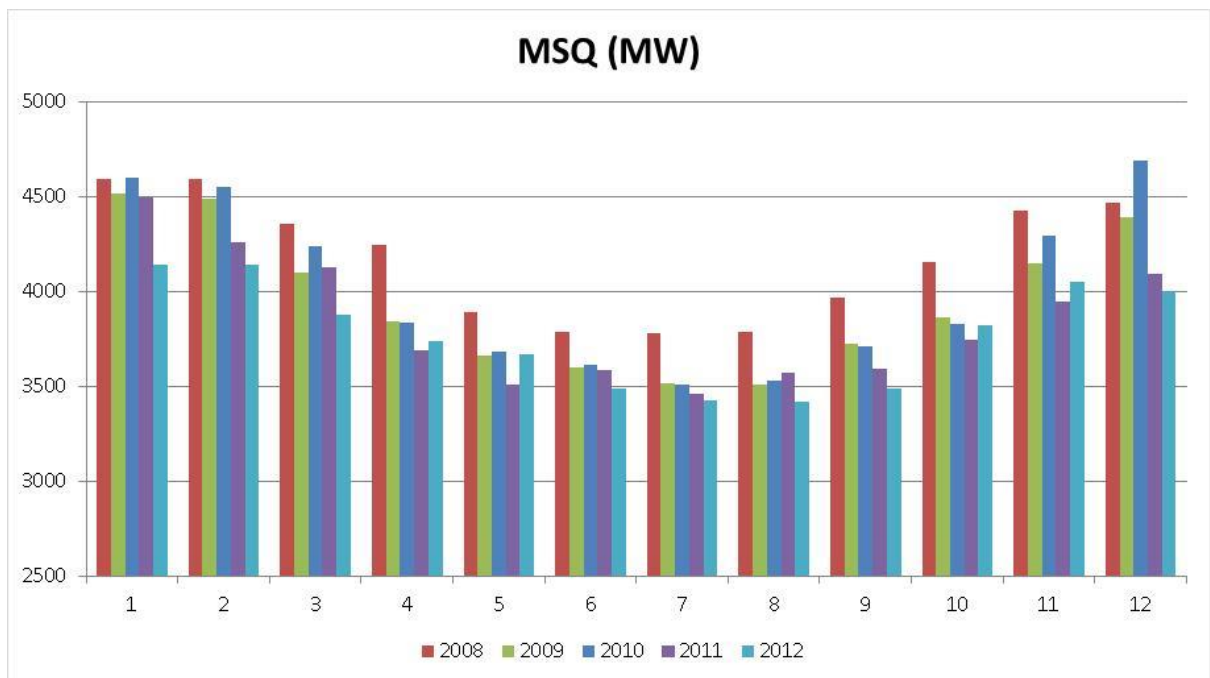


Figure 9: SEM System Demand

In the winter months, the daily demand profiles tended to show a strong spike in demand around the early evening period (17:30 to 18:00), while during the summer months the profiles exhibited a flatter shape, with the daily peaks occurring around 12:00.

The average 2012 MSQ of 3,766MW has fallen by 2% when compared with the average 2011 figure of 3,836MW.

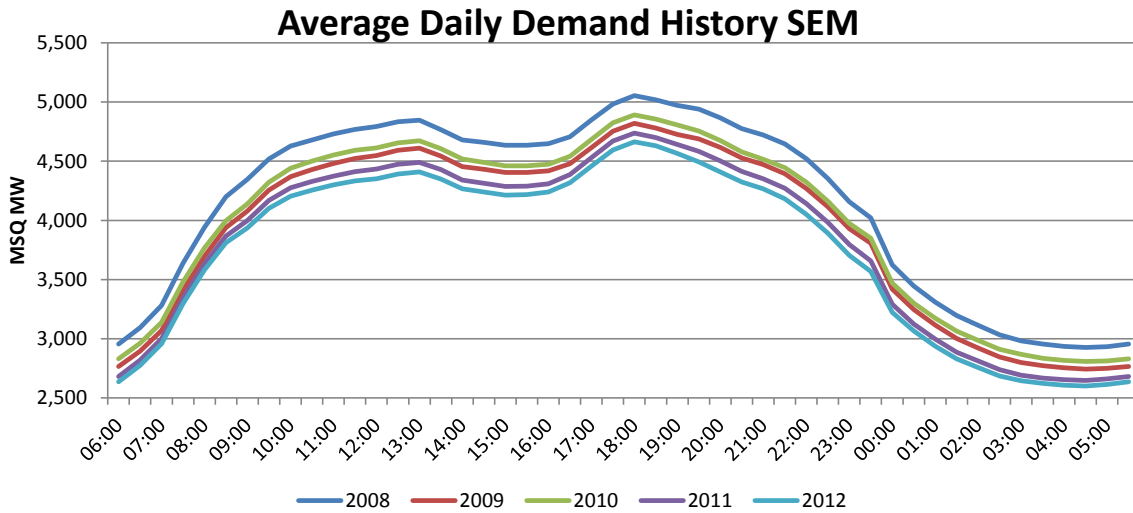


Figure 10: Average Daily Demand History in the SEM

The Daily Demand Profiles show 2012 demand being consistently the lowest since the SEM began. This reflects the ongoing changes in demand as a result of the continued economic downturn.

Interconnector Flows

The SEM is connected to the electricity market in Great Britain via two interconnectors. The Moyle interconnector is a sub-marine cable running between Scotland and Northern Ireland with a maximum import capacity (Scotland to Northern Ireland) of 450MW and a maximum export capacity Northern Ireland to Scotland) of 295MW.

The East-West Interconnector (EWIC) is a high-voltage direct current sub-marine and subsoil power cable running between Wales and the Republic of Ireland. It has an import capacity of 530MW and an export capacity of 500MW. EWIC went live on 21 December 2012.

In operating the Interconnectors between Great Britain and the SEM, Moyle and EWIC provide generators in Great Britain with access to the SEM (and conversely generators in Ireland access to BETTA).

Moyle operates two poles which in total provide the maximum import capacity of 450MW. A fault occurred on one of the poles on 26 June 2011 which meant Moyle was operating on reduced capacity as only one pole was available. On 24 August 2011 a further fault occurred on the second pole resulting in the Moyle interconnector being unavailable for the rest of 2011.

Both these faults have been repaired; however, a further fault occurred on 23 June 2012 has reduced available capacity on Moyle and is being investigated. Currently the maximum capacity of Moyle is 250MW for both import and export.

The following graph shows the monthly Moyle flows since 2008.

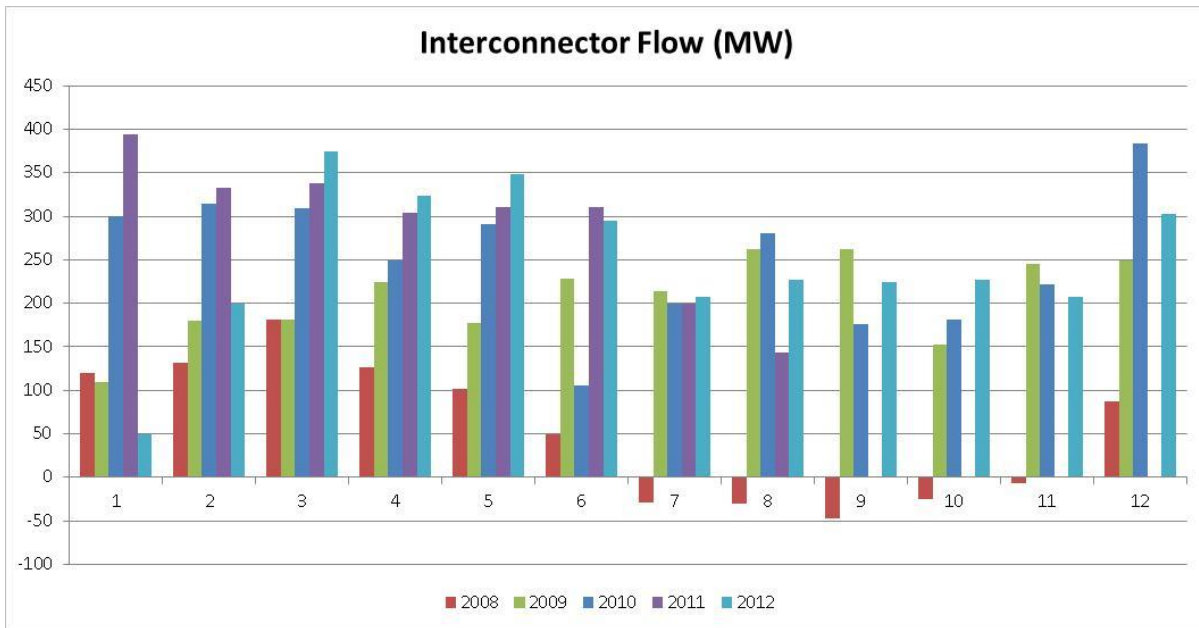


Figure 11: Average Monthly Interconnector Flow

The MMU also monitors price comparisons between SEM and BETTA. 2012 saw increased flows via the interconnector following the return of the Moyle following the faults that caused its outage for the second half of 2011.

The graph below illustrates the trends in prices since the start of the SEM, and displays the relationship between the flows on the interconnector - in relation to prices in SEM and BETTA.

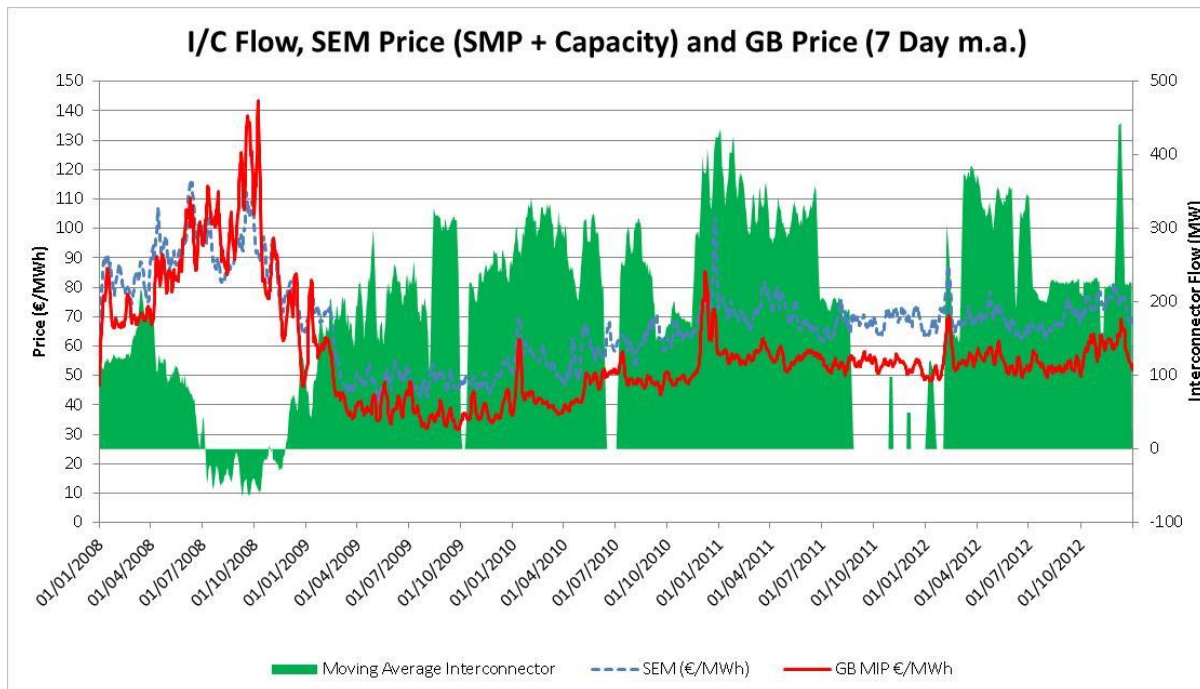


Figure 12: Moyle Flow, SEM Price and GB Price (7 day moving average)

3 KEY WORKSTEAMS AND PROJECTS

This section contains an update on each of the key projects undertaken by the SEM Committee in 2012

3.1 EUROPEAN MARKET INTEGRATION

Due to its centralised structure and gross mandatory pool design, it is likely that the SEM will require significant modifications to implement the Target Model. In recognition of this, Agency for Cooperation of Energy Regulators (ACER) has granted the SEM a two-year derogation, an additional two years to implement the Target Model, i.e. from 2014 to 2016.

In January 2012, the SEM Committee published a consultation paper in January 2012 to seek views on options for implementing the Target Model in Ireland and Northern Ireland in a manner that is consistent with national and EU policy objectives. In addition, the RAs hosted a number of industry workshops and engaged with a wide range of stakeholders including Government Departments, System Operators, Ofgem and ACER to discuss the issues involved in integrating SEM into the European market.

The SEM Committee published a proposed decision paper on the next steps in the process of market integration in November 2012 and a final decision paper in February 2013. The main conclusions of this paper include:

- The establishment of a set of high-level principles which will govern the design and implementation of the new market;
- The establishment of project governance arrangements with strengthened stakeholder engagement to ensure that consumer groups and market participants are adequately involved in the project;
- Commitment to maintaining the current structure of the SEM until 2016 and to carrying out an impact assessment on the new market design in line with best practice; and
- A working assumption that the new market will continue to be based on transparent, centralised trading arrangements with least-cost dispatch.

3.1.1 FRAMEWORK GUIDELINES AND NETWORK CODES

The detailed rules of the Target Model are developed by ACER and the European Network of Transmission System Operators for Electricity (ENTSOE) and are finalised by the European Commission.

ACER initiates the process by developing Framework Guidelines. Based on these Framework Guidelines, ENTSOE develops detailed Network Codes. This is all done in consultation with interested stakeholders. The final Network Codes will be made into binding Regulations following a comitology process. More information on this process and the individual Framework Guidelines and Network Codes is available on the ACER and ENTSOE websites.

On 25 September 2012, ACER Adopted the Framework Guidelines on Electricity Balancing and reviewed four Network Codes as submitted by ENTSO: the Network Code on Requirements for Generators, the Network Code on Demand Connection, the Network Code on Capacity Allocation and Congestion Management.

3.1.2 ACER

ACER issued preliminary opinions on the Requirements for Generation Network Code (October) and the Capacity Allocation and Congestion Management Network Code (December). ACER called for improvements to be made in both of these codes before they are passed to the European Commission and the comitology process.

In order to enable an efficient transition to the single European market, a number of regional initiatives were launched in 2006. These initiatives bring together Regulators, TSOs, the European Commission, Member State Governments, industry and stakeholders to develop and implement common policies for the trading of electricity across borders in each region. Ireland is part of the France-UK-Ireland (FUI) region.

The SEM Committee continued to progress work related to increasing electricity market integration with neighbouring jurisdictions in the FUI region throughout 2012. Key achievements for the FUI region include:

- Approval of detailed access arrangements (Access Rules) for use of the East West and Moyle interconnectors;
- Approval of the charging methodology for interconnector capacity acquired at the intra-day timeframe;
- Establishment of joint working arrangements with Ofgem; and,
- Agreement that TSOs in the region should engage in greater levels of cooperation and that they should develop more robust countertrading and balancing arrangements in region.

3.1.3 SEM EUROPEAN MARKET INTEGRATION PROJECT

Fully integrating the Single Electricity Market in its current form into the emerging EU internal electricity market will pose a significant challenge for SEM, in particular for the day ahead and intraday Target Models set out in the *ACER Framework Guidelines for Capacity Allocation and Congestion Management (CACM)*.

Since the CACM consultation concluded in June 2011 and following the SEMC response to this, the RAs worked with ACER to acknowledge the difficulty associated with reaching the Target Models considering the present SEM design through insertion of drafting which would allow for SEM to transition to the Target Model. This facilitation of additional time for SEM to meet the Target Model is accommodated in the final draft CACM adopted by the Commission.

At their July 2011 meeting SEM Committee asked that the RAs lead a project team involving the SEM TSOs and the SEM Market Operator (SEMO) with the initial objective of providing a report to the RAs and the SEM Committee by December 2011 on the identification of feasible options for SEM to pursue to comply with the Target Models for the internal electricity market by 2016.

A project initiation document related to this work was published by the SEM Committee on 8 August 2011.⁴

To date, this project has involved significant engagement with relevant European stakeholders, particularly regulators and Transmission System Operators/Power Exchanges in the FUI region and elsewhere. Furthermore given the importance of this project for future SEM design, regular briefings have been given to the respective Member States and a number of workshops held for market participants.

The SEM Committee's consultation paper "*Proposals for Implementation of the European Target Model for the Single Electricity Market*" (SEM-12-004) was published on 24 January 2012. The Consultation Paper set out a description of the SEM, the European context and Target Model Proposed, Evolutionary and Revolutionary Options for Target Model Implementation and legal and governance issues. Consultation responses were due on 20 April 2012 and work will continue on the project to reach decisions on next steps in cooperation with the respective Government departments, DCENR and DETI.

3.2 DS3 – DELIVERING A SECURE, SUSTAINABLE ELECTRICITY SYSTEM

Following on from the [Facilitation Of Renewables Studies](#)⁵ in 2010, the RAs requested that the Transmission System Operators (TSOs) carry out further analysis and put in place a programme of actions in order to address the system operation challenges identified, and to deliver renewable commitments and the requirements of [Directive 2009/29/EC](#) ("the Renewables Directive").

The TSOs' response is called the "DS3 Programme – Delivering a Secure, Sustainable Electricity System". It has involved the TSOs undertaking a detailed analysis of the requirements for system services to support the secure and reliable operation of the system on the island of Ireland as levels of non-synchronous wind penetration increase.

Delivery and implementation of the DS3 programme is the responsibility of the TSOs. The RAs' role is to review and consider the options and proposals put forward by the TSOs and industry, and to make a decision through the SEM Committee on the outcome of the work-streams. The SEMC is also involved in monitoring progress throughout the programme and ensuring that the interests of the all-island customer are protected.

For full details of the DS3 programme, a [DS3 overview document](#)⁶ and a [project plan](#) for the DS3 system services review⁷, please refer to the EirGrid website for the [DS3 programme office](#)⁸.

3.2.1 CONSULTATIONS

The first consultation in December 2011 was a high level consultation seeking views from interested parties on a range of questions related to the provision of system services⁹.

⁴ http://www.allislandproject.org/en/TS_Decision_Documents.aspx?article=c67daa67-ab4a-4ff8-8098-32a8edbdf91e&mode=author

⁵ <http://www.EirGrid.com/renewables/facilitationofrenewables/>

⁶ <http://www.EirGrid.com/media/DS3%20Programme%20Overview.pdf>

⁷ <http://www.EirGrid.com/media/DS3%20System%20Services.pdf>

⁸ <http://www.EirGrid.com/operations/ds3/ds3programmeoffice/>

The [second consultation](#)¹⁰ on the new services required for the system in 2020 was published in June 2012. EirGrid and SONI held a System Services Forum in Dundalk in July 2012 to inform industry and discuss the issues facing DS3 implementation.

EirGrid and SONI published a [third consultation](#)¹¹ paper in December 2012 and offered bilateral meetings with interested parties. During the bilateral discussions, EirGrid and SONI were requested to provide more modelling information that supported the approach and figures presented in the paper.

3.2.2 INDUSTRY FORUMS AND ADVISORY COUNCIL

As noted above, the SOs held industry forums to engage customers and stakeholders in the DS3 process. The SOs held forums in: Dublin on 14 March 2012; Dundalk on 4 July 2012; and Dublin on 5 November 2012.

EirGrid and SONI established an Advisory Council to ensure that the views of industry are represented within the DS3 programme. [Details of the meetings](#)¹², including agenda, presentations and reports are published on the SOs websites.

3.2.3 STRATEGY FOR RENEWABLE ENERGY 2012-2020

In 2012 the Irish government issued a [Strategy for Renewable Energy 2012-2020](#). This document reinforced a commitment to deliver the renewable electricity targets and supported the requirement to build the necessary grid infrastructure and develop the operational solutions needed to manage increasing levels of variable renewable generation.

3.3 MARKET POWER AND LIQUIDITY

In 2010 the Regulatory Authorities (RAs), on behalf of the SEM Committee, commenced a review of market power and contract liquidity in the SEM. The overall aim of this project was to identify practical ways in which the RAs can further promote competition in the SEM by reducing/mitigating market power and/or improving contract liquidity over the course of the next 10 years.

On 25 November 2011 the SEM Committee published a draft decision (SEM-11-089), along with a report from CEPA consultants. The purpose of this draft decision paper was to:

- Summarise the key comments received to CEPA's report and provide SEM Committee responses;
- Provide an update on recent developments relevant to market power and liquidity;

⁹ [http://www.EirGrid.com/media/System%20Services%20Consultation%20\(Preliminary\).pdf](http://www.EirGrid.com/media/System%20Services%20Consultation%20(Preliminary).pdf)

¹⁰ http://www.EirGrid.com/media/System_Services_Consultation_Products.pdf

¹¹ http://www.EirGrid.com/media/System_Services_Consultation_-_Finance_Arrangements.pdf

¹² <http://www.EirGrid.com/operations/ds3/communications/advisorycouncil/>

- Provide the SEM Committee's view regarding issues, inter alia, market power mitigation measures and contract liquidity.

In February 2012 the SEM Committee published its decision paper on Market Power and Liquidity. This confirmed that the SEM Committee would:

- Maintain the Bidding Code of Practice, Market Monitoring Unit and Directed Contracts (BCoP, MMU and DCs) as key building blocks of a market power mitigation strategy within the SEM. If the spot market becomes significantly less concentrated in the future, the Committee will review these market power mitigation measures;
- Not allow ESB vertical (generation-supply) integration for now, but allow the horizontal integration of ESB generation units from October 2012, i.e. of ESB PG and ESBI (Synergen and Coolkeeragh), given the low market power risks involved;
- Continue with the current 1,150 HHI level for the determination of DC volumes; DC volumes from the horizontal integration of ESB (referred to above) are expected to increase significantly from 2010/11 levels. That said, the SEM Committee will continue to monitor the market and if there is any evidence of market power being exercised and liquidity levels significantly falling, the Committee reserves the right to take further action, including the lowering of the HHI threshold.

3.4 DISPATCH BALANCING COSTS – INCENTIVISATION

Dispatch Balancing Costs (DBC) represents the vast majority of the Imperfections Allowance, a significant cost which is passed on to the all-island customer. In the previous tariff period, (1 October 2009 to 30 September 2010) DBC represented nearly 5% of the entire value of the SEM. The RAs decided to consult on incentivising the TSOs to manage all-island DBC (SEM-11-048).

The purpose of this consultation paper was to gain feedback from stakeholders regarding incentivisation including the design parameters, rewards and penalties. It is important to note that any incentivisation mechanism would only be applicable to aspects which TSOs have control and therefore uncontrollable factors (e.g. unforeseen long-term outages) will not have an impact on the reward/penalty. The consultation paper outlined a potential DBC incentive mechanism based on rewards and penalties around ex-ante outcomes.

The SEMC has decided to introduce an all-island DBC incentive mechanism from 1 October 2012 onwards, to operate on an annual basis.

3.5 TSO CERTIFICATION

The European Commission's Third Internal Energy Market Package is designed to facilitate progress towards the creation of a single EU gas market and electricity market which will result in a more efficient and competitive market, increased consumer choice and contribute to security of supply and sustainability. Directive 2009/72/EC identified the need to remove incentives to discrimination in access to the transmission system and encourage investment in the system through separation of the transmission network from generation and supply. One of the core provisions of the Third Package is to ensure that Transmission System Operators are unbundled or separate from generation, production and supply interest and that they are certified as being so. The Third Package envisages that this unbundling will be effective in removing any conflicts of interests between producers, suppliers

and transmission system operators. To ensure compliance with the requirements of the Directive a Transmission System Operator (TSO) is required to be certified on one of the four grounds set out in the Directive.

The SEM Committee decided in May 2011 that the issue of TSO certification in Northern Ireland was a SEM matter and that it was therefore responsible for the process of certification in accordance with the legislative provisions in Northern Ireland. Following this, in November 2011, the SEMC decided that TSO Certification in Ireland was a SEM matter.

The SEM Committee published guidance to applicants in Northern Ireland in December 2011 and for applicants in Ireland in February 2012. The guidance set out the relevant grounds available to applicants in Ireland and Northern Ireland, the information required to allow a decision by the SEM Committee to be taken and the timescale for the process.

3.6 CPM MEDIUM TERM REVIEW

In 2009 the SEM Committee published an information paper which set out the various work streams that formed part of the medium term review into the Capacity Payments Mechanism (CPM). The SEM Committee wished to satisfy that the correct signals and appropriate incentives or rewards are inherent in the design, so as to meet its objectives optimally. In particular the SEM Committee was mindful that the CPM provides signals for new entry/investment and should reward plant and capacity in accordance with its performance. These work-streams were progressed throughout 2010 and 2011.

A final decision paper on the Medium Term Review was published on 6 March 2012 (SEM-12-016)¹³. The main outputs from this decision paper were:

- Infra-Marginal Rent will be deducted from the cost of the Best New Entrant on an annual basis;
- The Forced Outage Probability in the Capacity Requirement calculation should be increased to 5.91%; and
- The BNE will be calculated in 2013 and the BNE Peaker Cost (€/kW/yr) will be fixed and indexed for a three year period.

These proposals were implemented in 2012 (during the calculation of the 2013 Annual Capacity Payment Sum).

Several elements, both domestic and European, could impact the CPM during this three year period. In 2012 the TSOs, in cooperation with the Regulatory Authorities, undertook a Systems Services Review (DS3¹⁴) multistage consultation process. The proposals / services identified may impact the ancillary services revenues earned by the BNE over the three year period. The Regulatory Authorities reserve the option to review the ancillary services reduction in future years of this period, if they believe it is appropriate to do so.

The European Integration timelines may also impact upon the CPM. In spring 2015 The Regulatory Authorities will review whether the fixing of the BNE calculation should be extended based on European Integration.

¹³ http://www.allislandproject.org/en/cp_decision_documents.aspx?article=5ce2db5f-6c79-4454-9779-53dd7fae8dba&mode=author

¹⁴ <http://www.EirGrid.com/operations/ds3/>

4 OPERATIONAL WORK-STREAMS

This section contains an update on each of the key operational work-streams ongoing under the SEM Committees remit.

4.1 SEM CONTRACTING

4.1.1 DIRECTED CONTRACTS

Quantification of Directed Contracts

The quantities of DCs imposed on the incumbent generators are set to achieve a desired concentration level in the SEM as measured by the Herfindahl-Hirschman Index (HHI)¹⁵. A HHI threshold of 1,150 was chosen by the RAs and, at this HHI level, only ESB Power Generation (ESB PG) was required to sell DCs in 2012. Three DC products were required by the RAs to be offered by ESB PG—baseload, mid-merit and peak – in order to reduce market concentration in each segment for each quarter to a HHI of 1,150. Since summer 2012 Directed Contracts are now offered quarterly for a period up to five quarters ahead, on a rolling basis. The quantities which the RAs obliged ESB PG to offer to eligible suppliers to meet this HHI threshold from Q4 2012 to Q3 2013 are shown in table 3 below.

ESB PG Directed Contract Quantities (MW)			
Quarter	Baseload	Mid Merit	Peak
Q4 2012	247	0	165
Q1 2013	298	0	0
Q2 2013	361	14	N/A
Q3 2013	360	111	N/A

Table 3: ESB PG Directed Contract Quantities (MW)

The contracts were sold to eligible suppliers in two separate subscription processes by ESB PG in each quarterly auction. These consisted of a Primary Subscription Window and a Supplemental Subscription Window in which any unsold contracts were offered to those suppliers who had bought their full share in the Primary Subscription Window. Figure 15 below shows the volume of DCs that ESB PG and NIE PPB were required to offer from the beginning of the SEM. The chart shows an increase in the total volume of contracts in the second and third years, then a significant reduction in the fourth year, followed by a small increase in the fifth year. There was a significant increase this year due to the horizontal integration of ESB's generation assets.

¹⁵ The Herfindahl-Hirschman Index (HHI) is defined as the sum of the squares of the market shares of the 50 largest firms (or summed over all the firms if there are fewer than 50) within an industry, where the market shares can be expressed as fractions or whole number percentages.

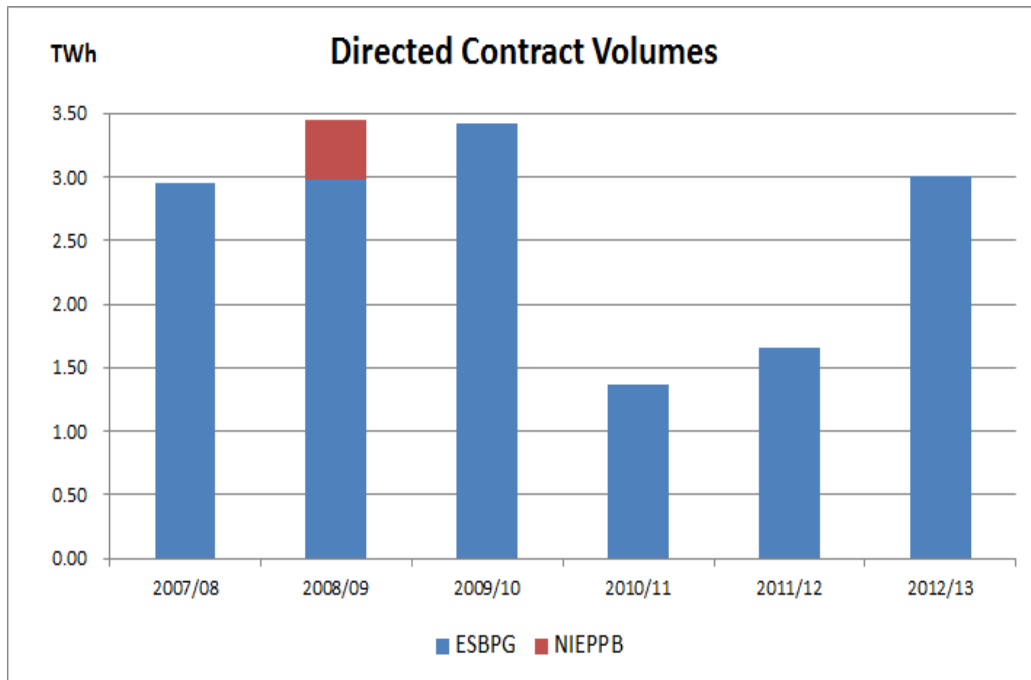


Figure 13: Directed Contract Volumes

Pricing of Directed Contracts

The prices of the DCs were determined each day during the subscription periods of each quarterly auction using forward fuel and carbon prices and regression formulas determined by the RAs through econometric analysis. These formulas were designed to mimic the results of the validated SEM PLEXOS model. The prices of Directed Contracts are published by the RAs on the All Island Project website after each quarterly auction.

4.1.2 PSO CONTRACTS

In addition to the above contracts, ESB PG also offered generation associated with the Irish Public Service Obligation (PSO). The RAs determine the reserve prices (using the Validated PLEXOS model and up-to-date forward fuel prices) that these products are offered to the market at and they are then auctioned off to suppliers. For the 2012/13 contract year the PSO-Related CfDs are being offered on a quarterly basis, with auctions occurring about a month ahead of the quarter in question. Contracts are being offered at monthly granularity with a mix of products between baseload, mid-merit 1 and mid-merit 2.

4.1.3 SEM NON-DIRECTED CONTRACTS

While the RAs' legal remit on behalf of the SEMC largely extends to DCs, licensed generators can also offer Non-Directed Contracts (NDCs) to the market, for example NDCs are regularly offered by ESB. The RAs do not set the price or quantity of NDCs as they are agreed on a bilateral basis between market participants. They do however take an active role in the monitoring and development of the NDC market by assessing the reasonableness of prices. An "Over the Counter" (OTC) trading facility commenced in 2011. This is helping to assist liquidity, by

allowing for suppliers and generators to interact more with respect to NDC price and quantities, assisting in price discovery.

4.2 GENERATOR FINANCIAL REPORTING AND GENERATOR REVENUES

4.2.1 GENERATOR FINANCIAL REPORTING

During 2012, and as in previous years, the MMG assessed key generator financial performance in the SEM. This information was provided to the SEM Committee to inform them on the financial performance of generators in the SEM.

In addition, a decision document was published by the RAs in May 2012, taking account of comments received to the public consultation on the publication of information on generators' financial performance. This decision paper set out the financial reporting template to be completed by generator companies with a combined capacity greater than or equal to 25MW and the timelines for the annual publication by the RAs of a report covering profit levels of generators operating in the SEM. The financial information received will only be published in banded format (rather than by individual generator) in order to preserve commercially sensitive data.

4.2.2 GENERATOR REVENUES

Revenue analysis is also a function of the MMU together with analysis of implied infra-marginal rents and capacity payments made to Generator Units. In carrying out such analysis the MMU examines the pool revenue streams for different plants and different technologies.

Generator pool revenues in the following charts are calculated by multiplying half-hourly MSQ by half-hourly SMP to give a percentage monthly breakdown by generator type. The total generation pool revenue for 2012 amounted to over €2 billion. Gas plants made up 51% of Generator pool revenues reflecting a decrease of 13% compared with 2011. A notable increase was in coal generator pool revenues which rose 10% to reflect a total of 22% coal generator revenue for 2012. Wind had 11% of generator pool revenues with the remaining plant types making up 11% of the pool revenues earned.

Monthly Generation Revenue Breakdown

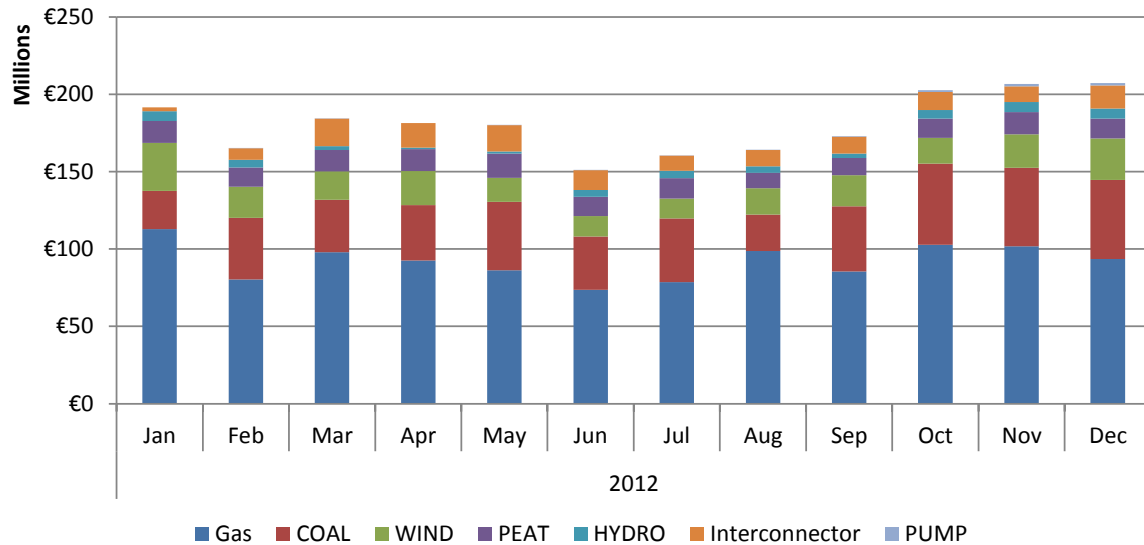


Figure 14: 2012 Generator Type Pool Revenue Monthly Breakdown.

Further information on Generator Revenues can be found within the Regulatory Authorities' Report on Generator Financial Performance in the SEM¹⁶.

4.3 MARKET MONITORING

The MMU conducts regular internal reports on the active monitoring of the SEM to the SEM committee. As the SEM structure evolves and competition increases, the SEM Committee and the MMU will monitor the market bidding principles and consider appropriate modifications, if needed, given that their primary aim is to detect and report the abuse of market power.

During 2012 the MMU actively engaged in a number of discussions with several market participants regarding interpretation of the Bidding Code of Practice and several investigations have been conducted and concluded in this period. These investigations typically involve a combination of technical issues, policy and process which the MMU need to communicate to internal stakeholders including RA Directors, SEM Oversight Committee and the SEM Committee.

The MMU is also expected to monitor the exertion of market power by strategically withholding capacity from the market, including examining patterns of unit outages over time to see if the timing of outages created uplift to bidder revenues.

¹⁶ http://www.allislandproject.org/en/market_decision_documents.aspx?article=e6d2c21b-cba5-4dfa-a0a8-24ce40fc3e1a

4.4 DISPATCH BALANCING COSTS

Dispatch Balancing Costs (DBC) represents the constraint costs within the SEM and form the vast majority of the annual Imperfections Allowance. Constraint costs occur when the actual instructions issued to generators ('actual dispatch') differs from the market determined schedule of generation to meet demand ('market schedule'). Actual dispatch will deviate from the market schedule for reasons of, inter alia, transmission constraints, ensuring the continued security and stability of the transmission system, and operating the system in real time compared to the 'perfect foresight' of the Day + 4 (D+4) market schedule software run (managing renewables which are an inherently variable resource is more difficult in real time, for example).

The Dispatch Balancing Allowance for 1 October 2011 to 30 September 2012 was set ex-ante at €142.6 million. However, the ex-post final amount for the same period was €130.2m. The variance between ex-ante and ex-post is recovered in the following tariff year via the K factor mechanism.

The key factors during this period included:

- There was a downward trend of fuel costs in 2012 from those seen in 2011. In particular, coal, oil and distillate reduced with carbon costs falling off significantly. The exception was a spike in fuel prices in February due to the cold snap in Europe.
- Moyle Forced Outage: Dynamic reserve requirements were increased when both poles were unavailable for approximately 4 months of the tariff year and it was operational at half capacity for four months of the 2011/2012 tariff year. When it was not the largest single in-feed, reserve costs were reduced.
- East-West Interconnector Testing: The key factor that contributed to the significant fluctuations in DBC from July to September was EWIC testing, due to SEM rules for the treatment of an interconnector under test.
- Outages of generators: The cost of key security constraints were increased in January due to the combination of the outages Ballylumford Unit 31 (scheduled), Ballylumford Unit 32 (forced) and Moyle (operating at half capacity).
- Reserve providers: The return of the Turlough Hill pumped storage units from March to August reduced reserve provision from more expensive units.
- SEM Systems Release: In July, an issue arose with the profiling of dispatch quantities in the SEM market systems following the Intra-Day Trading software release. Resettlement occurred end of September 2012 and start of October 2012.

The graph below shows the Dispatch Balancing Cost weekly profile for the year October 2011 to September 2012. The red dotted line is the TSO weekly budget for DBC costs, while the blue bars show actual costs. The graph illustrates that overall actual costs were lower than the budgeted allowance.

Profile of Actual Dispatch Balancing Costs for Tariff Year 2011-12

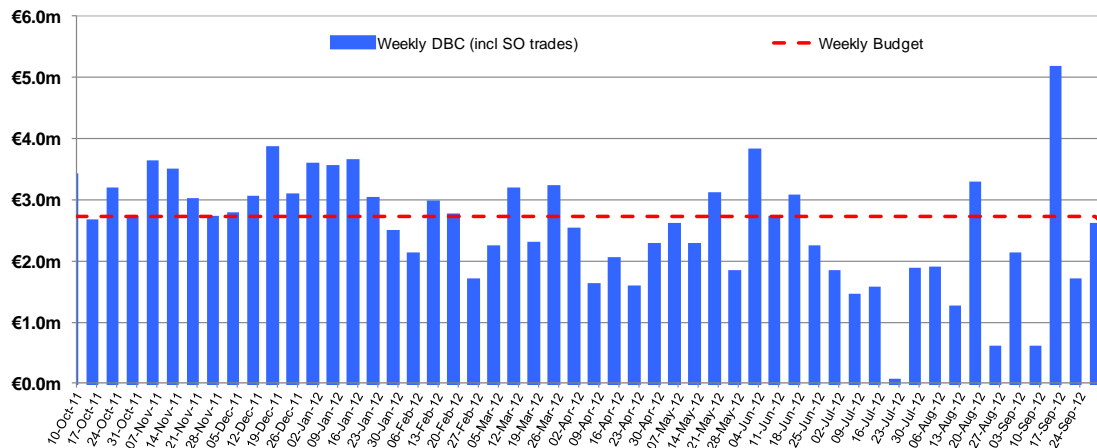


Figure 15: Actual v Budget Dispatch Balancing Costs for tariff year 2011-12 (Source: EirGrid/SONI)

Dispatch Balancing Costs (DBC) are a significant cost passed on to the all-island consumer and represent the vast majority of the Imperfections Charge. In the tariff year 2011-12 actual DBC represented 5.7% of the €2.3 billion¹⁷ market.

In light of the above, an all-island DBC incentive mechanism was introduced by the SEM Committee with effect from 1 October 2012. The DBC Incentivisation Decision Paper (SEM-12-033) outlines the parameters to determine the reward or penalty applicable. This incentive mechanism will be monitored over the coming years to determine its effectiveness.

4.4.1 NORTH-SOUTH TIE-LINE CONSTRAINT

The North-South tie-line provides cross-border interconnection between Northern Ireland and Ireland. Increasing and expanding cross border interconnection through the building of the second North-South tie-line will greatly enhance the flow of electricity throughout the island of Ireland. This is deemed essential to facilitate a more stable, secure and efficient all-island system.

In the absence of the second tie-line consumers are facing higher costs due to a less than optimal dispatch resulting in higher production costs and the requirement for a larger overall amount of installed generation capacity to meet the security of supply standards in both jurisdictions. The System Operators (SOs), EirGrid and SONI, have estimated the benefits being lost in 2011 due to the absence of a second North South line is in the order of €30m per annum.

EirGrid and SONI produce an annual All-Island Generation Capacity Statement for which the most recent is 2013-2022¹⁸. This highlights the importance of the additional North-South tie line in relation to the long term security of

¹⁷ EirGrid Group Annual Report 2012 <http://www.EirGrid.com/media/EirGridAnnualReport2012.pdf>

¹⁸ <http://www.soni.ltd.uk/AboutUs/News/SONIGenerationCapacityStatement2013-22.html>

supply position in Northern Ireland. Given all of the above the SEM Committee wishes to see the proposed second North South tie-line delivered as soon as possible.

4.5 CAPACITY REQUIREMENT AND ANNUAL CAPACITY PAYMENT SUM FOR 2012

The Annual Capacity Payment Sum for calendar year 2013 was determined in 2012. This took account of the outcomes of the CPM Medium Term Review, described above. It involved establishing the fixed costs of a Best New Entrant peaking plant in the market and the TSOs calculating the capacity required to meet the all-island generation security standard.

There was no significant change in the Annual Capacity Payment Sum between 2012 and 2013. Table 4 shows the BNE cost, the Capacity Requirement and the Annual Capacity Payment Sum for 2007 to 2013.

Year	BNE Peaker Cost (€/kW/yr)	Capacity Requirement (MW)	ACPS (€)
2007	64.73	6,960	450,517,348
2008	79.77	7,211	575,221,470
2009	87.12	7,356	640,854,720
2010	80.74	6,826	551,133,375
2011	78.73	6,922	544,956,545
2012	76.34	6,918	528,120,120
2013	78.18	6,778	529,876,722

Table 4: Annual Capacity Payment Pots for the Trading Years 2007 to 2013

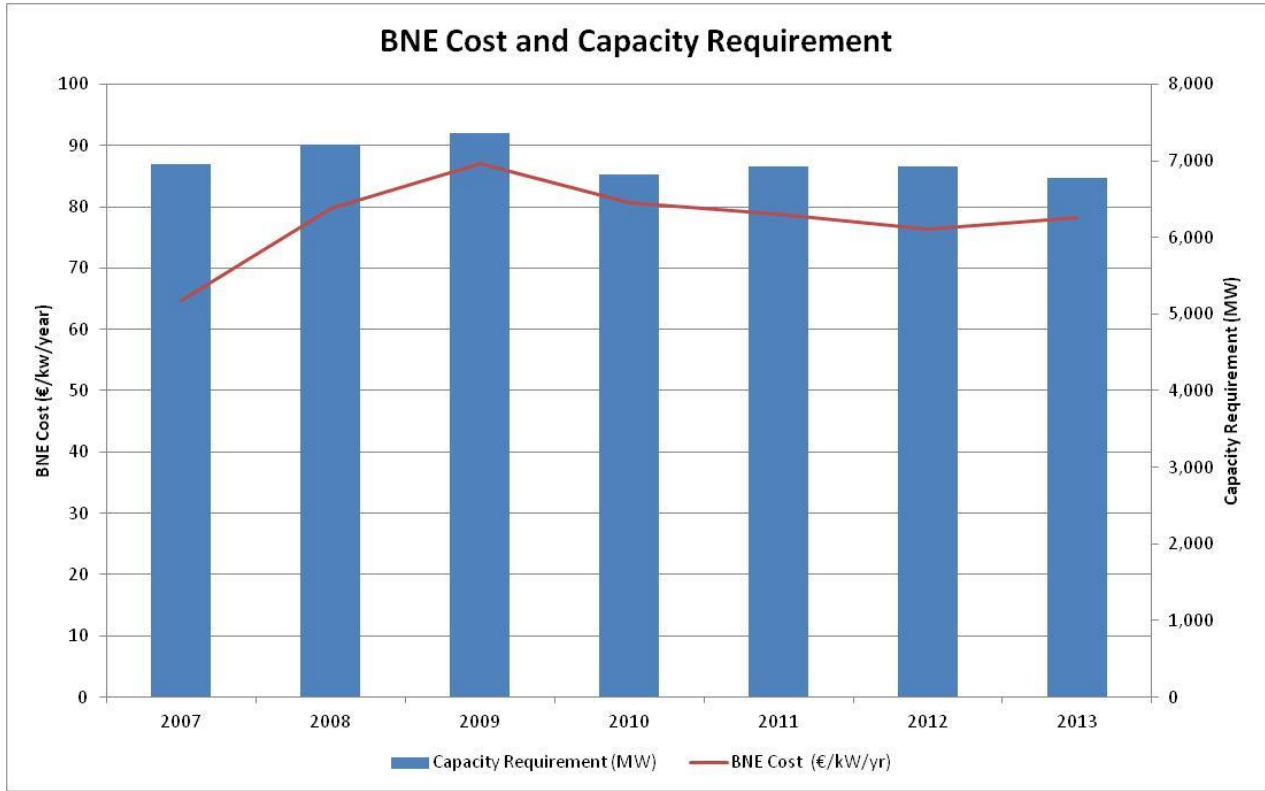


Figure 16: BNE Cost and Capacity Requirement

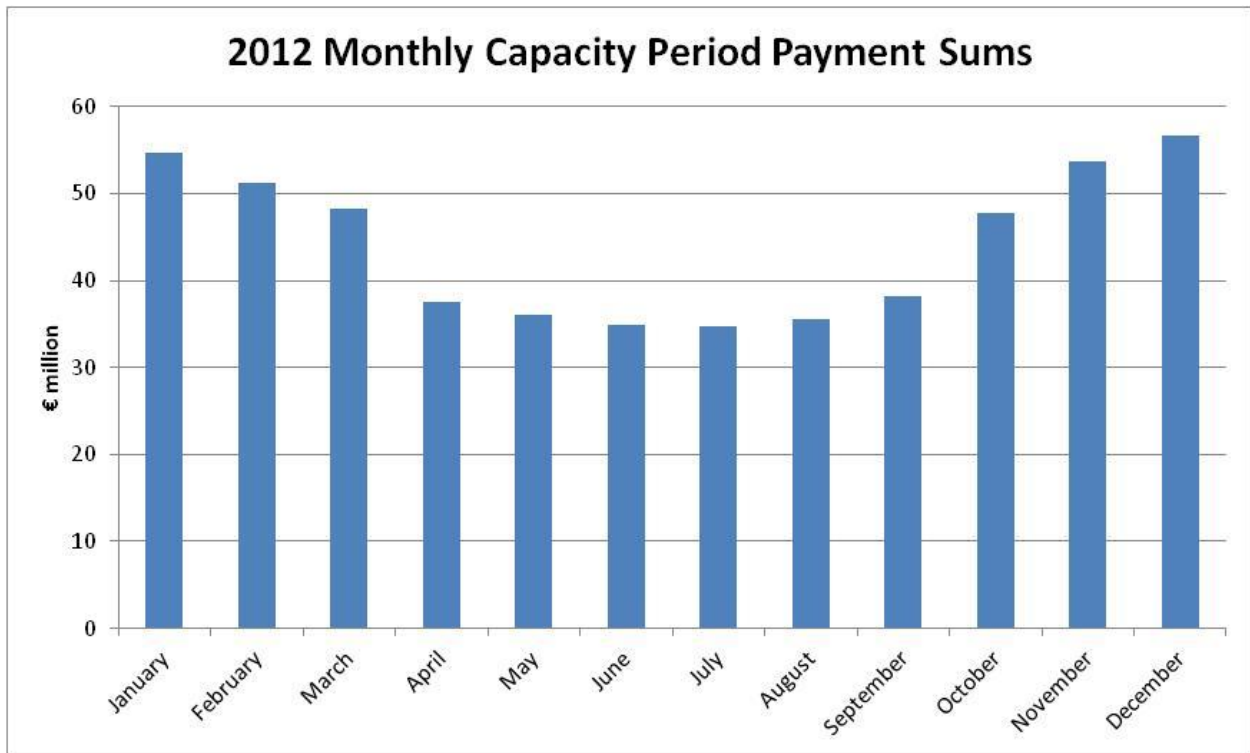


Figure 17: 2012 Monthly Capacity Period Payment Sums

4.6 SEMO REGULATION

A key area of work for the SEMO Regulation team is to work closely with SEMO in relation to projects that require regulatory approval for cost recovery. Key projects that have occurred within the period 2011/2012 are detailed below.

4.6.1 TSC MODIFICATIONS PANEL

This work entails attending TSC Modification Committee meetings, reviewing Final Recommendation Reports on Modifications, with a particular focus on Modifications that may incur a financial cost.

4.6.2 INTRA DAY TRADING (IDT)

Following an assessment by the SEMO Regulation team the SEM Committee approved an allowance for SEMO to implement Intra Day Trading to the single electricity market.

In preparation for Intra Day 'Go live' in July 2012 SEMO carried out considerable ground work to make the transition as smooth as possible, both internally and externally with the involvement of market participants and other stakeholders.

The Modification Committee, in accordance with AP12 of the Trading and Settlement Code, established an Intra-Day Working Group which has met regularly since 2010 to prepare modifications proposals in respect of Intra Day Trading. A modification proposal 18_10: Intra-day trading was approved by SEMC in February 2012 focusing mainly on interconnector users and their access to the maximum available transfer capacity.

In the lead up to 'Go live' SEMO provided Intra Day training throughout Ireland for market participants and stakeholders. Extensive testing of the system was carried out throughout the implementation process which included a market trial in the months leading up to 'Go live' in July 2012.

In general, the implementation of this Intra Day Trading project was successful with no major issues identified. SEMO continued to engage in daily conference calls with participants to address any issues that arose following IDT Go Live. Some minor defects were identified and subsequently resolved in a system 'wash-up' release.

4.7 TRADING AND SETTLEMENT CODE

4.7.1 CODE MODIFICATIONS

During 2012, 30 Modification Proposals were raised and considered by the Modifications Committee, down from 34 in 2011 and 43 in 2010. The majority of these were recommended for approval by the Modifications Committee and then subsequently approved for implementation by the SEMC.

4.7.2 MARKET PARAMETERS

As required, the SEM Committee consulted on several policy-related Code parameters including the market price cap, market price floor and the Uplift parameter values to apply in 2012; these remained unchanged from the 2011 values, with the Market Price Cap set at €1,000/MWh and the Market Price Floor set at -€100/MWh for 2011. In addition, in 2012 the SEM Committee consulted upon and approved the Operational Parameters to apply in 2013.

4.7.3 MARKET AUDIT

There is a requirement under the Trading and Settlement Code to carry out an annual audit of the Code. The audit terms of reference is consulted on by the RAs and can cover operations, implementation, trading arrangements and procedures and processes under the Code. In addition, the 2012 Market Audit covered the Market Operator (SEMO) and the Interconnector Administrator including a limited examination of interval demand side feeds from Meter Data Providers and System Operators including generation metering and dispatch instructions performed on an 'Agreed upon Procedures' basis. The results of the 2011 Market Audit was presented to the SEM Committee in April 2012. The audit opinion concluded that SEMO in its role as market operator 'have in all material respects, complied with the Code and relevant Agreed Procedures as defined in the "Decision Paper on the Terms of Reference for the 2012 Market Audit" published by the Regulatory Authorities on 21 August 2012.

4.8 SEM LOCATIONAL SIGNALS

4.8.1 TRANSMISSION LOSS ADJUSTMENT FACTORS (TLAFS)

Following consultation and analysis in 2011, culminating in the publication of a consultation paper in November 2011 (SEM-11-098) and a proposed decision in April 2012 (SEM-12-024) the SEM Committee published its decision in June 2012 (SEM-12-049) to not implement a splitting of the TLAFs between the market and dispatch schedules and to maintain compression of TLAFs as the longer term solution for the treatment of losses in both the market and dispatch schedules.

4.8.2 GENERATOR TUOS (GTUOS)

Following on from the GTUoS Charging Decision Paper published by the SEMC in September 2011 (SEM-11-078) the SEM Committee requested that further work be carried out on a number of areas of the methodology used to calculate GTUoS tariffs.

Following a detailed review of the areas identified, the TSOs published a GTUoS Methodology consultation paper (SEM-12-039b) on the 8 June 2012. Within the paper the TSOs calculated three sets tariff for respondents to consider.

After analysing the TSO paper and responses the SEM Committee published its decision paper (SEM-12-074a) and decided to recommend Tariff Set 2b, the new methodology tariff including old set rule, to be used to calculate the 2012/2013 GTUoS tariffs. As part of its decision the SEM Committee requested that the RAs and TSOs look into the scenario and assess whether any further changes are necessary, so that planning is better represented.

APPENDIX

ACRONYMS

ACER	Agency for the Cooperation of Energy Regulators
ACPS	Annual Capacity Payments Sum
BCOP	Bidding Code of Practice
BETTA	British Energy Trading & Transmission Arrangements (GB wholesale electricity market)
BNE	Best New Entrant
CACM	Capacity Allocation and Congestion Management
CER	Commission for Energy Regulation
CfD	Contract for Differences
CPM	Capacity Payments Mechanism
DC	Directed Contracts
DCENR	Department of Communications, Energy and Natural Resources
DETI	Department of Enterprise, Trade and Investment
FUI	France-UK-Ireland
GB	Great Britain
GTUoS	Generator Transmission Use of System
HAS	Haromised Ancillary Services
JMU	Joint Management Unit
MMG	Market Modelling Group
MMU	Market Monitoring Unit
MO	Market Operator
MOUG	Market Operator User Group
MW	Megawatt
MWh	Megawatt hour
NIAUR	Northern Ireland Authority for Utility Regulation – The Utility Regulator
NDC	Non-Directed Contracts
PSO	Public Service Obligation
RAs	Regulatory Authorities
REMIT	Regulation on wholesale Energy Market Integrity and Transparency
Rol	Republic of Ireland
SEM	Single Electricity Market
SEMC	Single Electricity Market Committee
SEMO	Single Electricity Market Operator
SMP	Single Marginal Price
SO	System Operator
SONI	System Operator of Northern Ireland
SRMC	Short Run Marginal Cost
TLAF	Transmission Loss Adjustment Factors
TSO	Transmission System Operator
TUoS	Transmission Use of System