

Single Electricity Market

Incentivisation of All-island Dispatch Balancing Costs

Decision Paper

5 June 2012

SEM-12-033

Table of Contents

1. INTRODUCTION	3
2. BACKGROUND	5
Factors for consideration	6
3. DBC INCENTIVE PROPOSAL COMMENTS & SEMC RESPONSE	10
Transparency of DBC	10
Appropriate & Effective Incentive Design	11
General Comments	13
4. SEM COMMITTEE DECISION	15
DBC Incentive design	15
Ex-post review	17
TSOs reporting and transparency measures	19
5. CONCLUSION & NEXT STEPS	20

1. INTRODUCTION

With the implementation of the SEM on 1 November 2007, constraint costs were no longer recovered separately by EirGrid and SONI (TSOs) in the Republic of Ireland and Northern Ireland respectively. Instead an all-island levy, administered through the all-island SEMO (Single Electricity Market Operator) Imperfections Charge, was established to cover these costs.

For the current tariff period of 1 October 2011 to 30 September 2012 the Imperfections Allowance, approved by the Single Electricity Market Committee (SEMC) is €185.2 million, which includes a large k-factor (€54.5 million) from the previous tariff period (SEM-11-060)¹. This is set to recover all-island Make Whole Payments, Energy Imbalance Charges and Dispatch Balancing Costs (DBC). The 2011/2012 allowance equates to a 72.6% increase on the 2010/2011 tariff period, mainly due to fuel cost increases over the last 12 months. As a result, the cost of constraining-on out-of-merit generation for reserve, transmission and/or system security constraints is expected to be greater.

In December 2010 the CER published a consultation paper on 2011/2012 transmission incentives (CER/10/220), which stated that management of DBC was a priority for the CER. The paper stated that:

“However this (setting incentives to manage Constraints costs and Ancillary Services costs) remains an objective and a priority for the CER. Reducing constraints costs (within DBC) and ancillary services costs are dealt with on an all-island basis and are regulated by the SEM Committee. The CER intends to work with the Northern Ireland Authority for Utility Regulation (NIAUR) and the Transmission System Operators north and south (SONI for Northern Ireland and EirGrid for Ireland) to develop and implement an appropriate incentive (s) in this area throughout the PR3 period”.

In January 2011 the UR published a consultation paper on the SONI Price Control 2010-2015 which also discussed the issue of DBC incentivisation².

“The costs of constraints and congestion management are increasing due to increasing interconnector trade, security of supply concerns, connection of wind generation and network congestion and these are included within the Imperfections Tariff. The Utility Regulator will work closely with CER to investigate further options for incentivisation, ensuring that all parties that influence the magnitude of the Dispatch Balancing Costs are incentivised to manage the aspects within their control, for the benefit of all consumers on the island”.

The CER subsequently published a decision paper on ROI transmission incentives³ (CER/11/128), while the UR made a decision on the SONI Price Control in April 2011⁴. The intention, repeated in these publications, was to

¹ Please see the following [link](#).

² Please see the following [link](#).

³ Please see the following links: [here](#) and [here](#).

⁴ Please refer to the following [link](#)

explore the possibility of placing correct incentives on the TSOs to manage DBC in an all-island context.

DBC represent nearly 100% of the Imperfections Allowance⁵, a significant cost which is paid for by the all-island electricity customer. In the tariff period 1 October 2009 to 30 September 2010 DBC represented nearly 5% of the entire value of the SEM⁶. A similar percentage was evident for the last tariff period 1 October 2010 to 30 September 2011. Influence over DBC and effective management of DBC to acceptable levels is a priority for the Regulatory Authorities and the SEM Committee.

In recognition of this and the year-on-year increase seen in the DBC, the CER and UR as Regulatory Authorities (RAs) decided to consult in June 2011 on the incentivisation of the TSOs to manage all-island DBC⁷. This decision paper now follows the consultation process.

The paper is structured in the following manner:

- **Section 1** provides an introduction to this issue.
- **Section 2** outlines the background of the DBC mechanism in the SEM.
- **Section 3** outlines the main themes of the submissions received to the consultation paper SEM-11-048 and the SEMC response.
- **Section 4** outlines the SEM decision in relation to the incentivisation of the TSOs to manage all-island DBC.
- **Section 5** provides a summary of decisions made in this paper and the next steps.

Please note this paper decides on the issue of all-island DBC incentivisation and not the incentivisation of all-island Ancillary Services.

Queries to this SEM Committee publication should be submitted to Jamie Burke (jburke@cer.ie) in the CER.

⁵ Please refer to SEM-11-060.

⁶ Please see the following [link](#).

⁷ Please see the following [link](#).

2. BACKGROUND

The SEMO Imperfections Charge is set on an annual basis to recover DBC which includes Constraint Payments (Costs), Uninstructed Imbalances and Testing Charges associated with generators. The charge also recovers Make Whole Payments and Energy Imbalance Costs. Full details on each of these individual costs can be found in SEM-11-060. Constraints costs make up the vast majority of DBC (in fact the 2011/2012 DBC forecast constraints is made up entirely of Constraint costs).

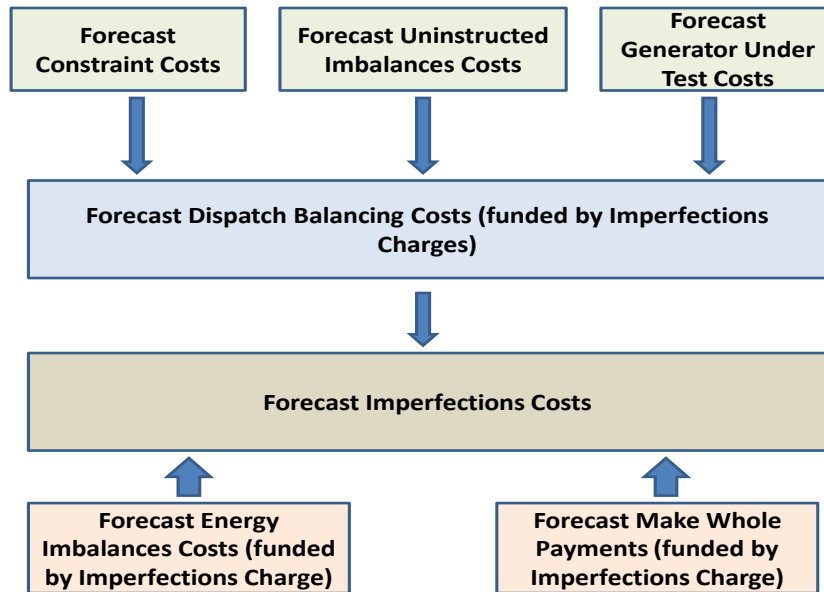
Constraint costs arise due to the differences between the market determined schedule of generation to meet demand (the 'market schedule') and the actual instructions issued to generators by the TSOs (the 'actual dispatch'). A generator that is scheduled to run by the market but which is not run in the actual dispatch by the TSO (or run at a decreased level) is 'constrained off/down'; a generator that is not scheduled to run or runs at a low level in the market, but which is instructed to run by the TSO at a higher level in reality is 'constrained on/up'. Costs associated from constraining on/ off generation are paid by the TSO to the relevant generators and are passed through to customers as part of the SEMO Imperfections Charge.

This, and resulting DBC, is an inherent feature of SEM design (AIP-SEM-42-05), a point which is acknowledged in section 3.6 of that paper, "*transmission constraints can arise when there is insufficient capacity in the transmission network to accept all the generation that wishes to produce and export (and is in the merit order) in a given area*". Constraints can also arise due to reserve and/or system security issues.

An important consideration is also the role that generators play in respect of DBC. Generation that is scheduled in the market or is required for reserve, but does not provide energy or reserve as expected in real-time increases constraints costs. Charges, as proposed by the TSOs, for Short Notice Re-declarations (SNDs), Trips, Generator Performance Incentives (GPIs) and reserve charges all help mitigate the effects of these additional DBC costs.

The forecast costs associated with Imperfection Charges are depicted in the table below. The budget required for all of these costs, including DBC, Energy Imbalances Costs and Make Whole Payments, is funded through the Imperfections Charge in the SEM, administered by SEMO.

Table 1: Forecast of Imperfections Charge make-up



With Uninstructed Imbalances and Testing Charges being set to zero for the 2011/2012 tariff period, DBC are made up entirely of Constraint Costs. Forecast Energy Imbalance Costs have also been set to zero⁸, while there is an allowance of €100k for Make Whole Payments⁹. Therefore, nearly the entire Imperfections Charge for the tariff period 2011/2012 is made up of DBC. Note that the Imperfections Charges are levied only on Suppliers in the SEM.

Factors for consideration

The consultation paper listed a number of factors when considering incentivising the management of all-island DBC by the TSOs. It was noted in the consultation paper that the points raised did not represent a complete set and the SEMC would welcome any other points of consideration raised by respondents. The issues outlined were:

(i) Level of DBC

DBC have been a significant cost of the SEM since its introduction in 2007.

⁸ Energy Imbalances are expected, in general to have a roughly equal and opposite offsetting effect to constraints to constraints and therefore the *ex-ante* forecast is set to zero.

⁹ Please refer to Appendix 1 of SEM-11-054 for a description of each of these costs.

Table 2: Forecast DBC since SEM implementation in nominal terms

2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
€109.3 million	€114.4 million	€106 million	€110.5 million	€185.2 million

Effective management, and indeed reduction of DBC protects and benefits the all-island customer and the SEMC should be exploring measures to promote this.

(ii) Response to CER & UR consultations

One of the main themes advanced by nearly all respondents to both the CER Transmission Incentives consultation paper (CER/10/220) and the UR consultation on SONI revenue requirements 2010-2015 is the need for introduction of an all-island DBC incentive mechanism.

(iii) Balancing Incentive mechanism in BETTA

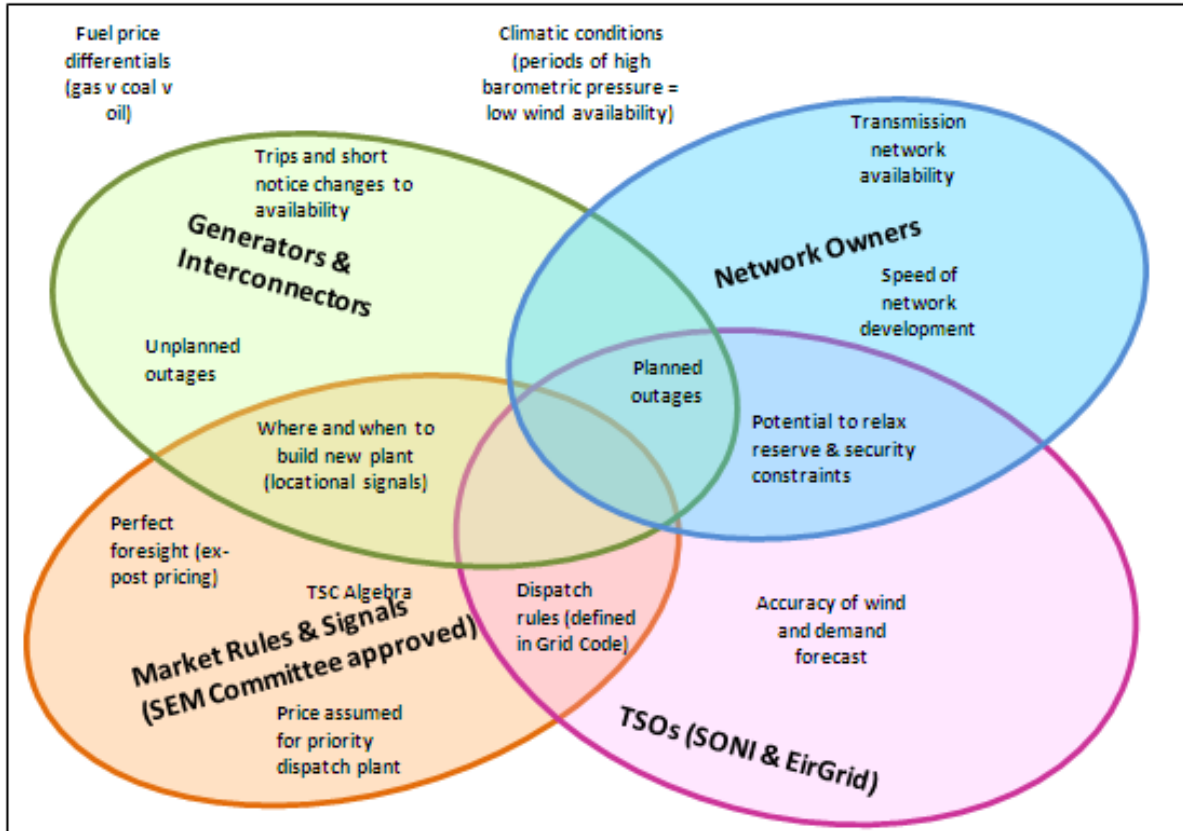
There is evidence in other markets; such BETTA in Great Britain, that effective incentivisation can have a positive impact on system balancing costs. Ofgem have operated a balancing incentive mechanism (in various forms) for over a decade¹⁰. It must also be acknowledged that the transmission industry structures differ between SEM and BETTA. EirGrid and SONI, as TSOs, do not own or carry out maintenance on the transmission assets, National Grid in Great Britain do. This implies that National Grid in GB has a greater ability to influence constraints costs.

(iv) Areas within/outside TSOs influence

The degree to which the TSOs can influence DBC is primary to the setting of any incentive. The various factors influencing DBC and how they interact are set out in the Venn diagram below.

¹⁰ Please refer to the following [page](#) on the Ofgem website for associated documents.

Table 3: Factors Influencing DBC



It is difficult to attribute a set level (percentage or otherwise) of contribution for each factor, considering the number of them that work in isolation and in tandem to form DBC output.

Clearly there are a number of factors which are outside the influence of the TSOs, including fuel costs, wind generation levels, unplanned outages etc. However there are factors that the TSOs (both directly and indirectly) can exert an influence on.

(v) Incentive design

If certain factors are outside the influence of a party then the incentive design must reflect this. A number of measures could be introduced which both protect the party from effectively being punished for factors outside of its influence, while easing it into the incentive framework (e.g. asymmetric targets and dead-bands). Furthermore, any DBC incentive mechanism must be administered by both RAs and across both TSOs to be effective and non-discriminatory. It cannot be introduced in one jurisdiction and not in the other, without being to a certain degree discriminatory.

(vi) Complementary Incentives

The transmission system ownership/operation split in EirGrid and SONI should not be, in its own right, a hindrance to the implementation of an all-island DBC incentive. Complementary incentives should promote the TSOs and TAOs in both jurisdictions working together, because it is in both their financial interests to do so.

3. DBC INCENTIVE PROPOSAL COMMENTS & SEMC RESPONSE

In June 2011 the SEMC asked stakeholders and the public to respond to the factors outlined and the proposed incentive structure in the consultation paper (SEM-11-048). The SEMC also welcomed additional comments on incentive design and other matters of relevance to DBC in the SEM.

There were fifteen responses received to SEM-11-048. It should be noted that a number of responses to the 2011/2012 Imperfections Charge consultation (SEM-11-054) also called for the introduction of a DBC incentive.¹¹ All non-confidential responses to SEM-11-048 have been published on the AIP website alongside this paper. They were:

- AES NI
- Bord Gáis Energy (BGE)
- EirGrid and SONI (TSOs)
- Endesa Ireland
- Energy Generation Infrastructure
- ESB
- Gaelectric Energy Storage
- IBEC
- Irish Wind Energy Association (IWEA)
- National Electricity Association of Ireland (NEAI)
- NIE Energy - Power Procurement Business
- Power NI
- Synergen
- The Consumer Council
- Viridian Power and Energy (VPE)

Below is an outline of general themes advanced in the responses, other general comments and the SEMC response to same.

Transparency of DBC

Most of the responses were concerned with the general transparency around the dispatch decision-making of the TSOs in the SEM. Dispatch decisions are a contributory factor to DBC, bearing in mind that DBC are a feature of the SEM design. Essentially a more open and transparent process needs to be put in place for providing stakeholders with information on the level of DBC and the influencing factors behind these costs (e.g. unscheduled generator outages/transmission constraints/fuel cost rises etc) during and after the tariff period.

As one respondent noted, *“transparency, brought about through regular reporting by the TSOs on dispatch decisions and DBC must be established as soon as*

¹¹ Please refer to the following link on the SEM website [here](#).

possible". Another stated, *"an annual performance report would also be useful to; detail the changes in the ex-ante forecasted DBCs; the reasons for the changes; the proportion of these changes that were within and outside of the TSO/TAO's control; the mitigating measures that were taken to reduce DBCs and the cost of these measures"*.

SEMC response

The SEMC fully agrees with respondents who believe transparency around the dispatch decision-making of the TSOs to be an important factor in any incentive proposal. As per the consultation paper it is important that clarity around levels of DBC (in aggregate and the specific factors affecting them) is provided to market participants. This will allow participants to understand the drivers behind DBC, the impact that DBC has on all-island customers and the steps being taken by the TSOs to reduce DBC.

The reporting and publication of DBC figures and associated data, on a quarterly basis, will be discussed in more detail in section 4.

Appropriate & Effective Incentive Design

A number of respondents believed that any incentive introduced must not produce any perverse results in TSO dispatch decision-making, a series of changes to the market rules or a new set of charges/penalties for market participants. Any incentive must be designed to as to give the TSOs the financial motivation to focus on initiatives to reduce DBC factors that are within their influence to an efficient level/lowest level possible.

As one respondent noted *"the structure of the incentive should be mindful of unintended consequences and should avoid competing with TSO system security obligations, while taking into account where possible material factors beyond the TSOs control"*.

The majority of respondents focused on the DBC incentive parameters, with most agreeing with the proposals set out in section 3 of SEM-11-048, (i.e. the levels proposed, use of dead-bands and asymmetric incentives). Some suggested a trial period to be put in place for a year, where targets would be implemented with no financial reward/penalties applying to the TSOs.

One respondent, while agreeing on the need of an incentive mechanism, suggested a number of adjustments to the levels proposed in SEM-11-048. This respondent's argued that for an incentive to be effective it must be realistic and the rewards attainable. This respondent also believed that an ex-post adjustment mechanism is necessary to protect both the TSOs and consumers from unexpected events which have a material impact on DBC.

Some respondents were in support of the proposal to incentivise wind and demand forecasting accuracy, because it is something that the TSOs *"have autonomy and therefore could be appropriately incentivised"*. Another believed

that *“if the RAs’ ultimate goal is to reduce DBC, this aim is better served through a single incentive against the DBC forecast”*.

SEMC response

The SEMC agrees that any incentive mechanism must not produce perverse results in dispatch and threaten system security. It should be noted that both TSOs are obliged under licence to operate *“a safe, secure, reliable, economical, efficient and co-ordinated electricity transmission system as part of an efficient, economical, co-ordinated, safe, secure and reliable electricity transmission system on the Island of Ireland as a whole”*. Therefore system security will always be of paramount importance to the TSOs.

Secondly, it is worth repeating that DBC are an inherent aspect of SEM design, rather than costs resulting solely from dispatch decisions made by the TSOs. Dispatch decisions result from maintaining system security given transmission constraints and reserve requirements. DBC minimisation may not always be the most efficient outcome, e.g. when traded-off against the cost of network delivery. So it is not possible under SEM design (nor economically efficient) to target the reduction of DBC to zero.

The principle of least cost dispatch has been enshrined in SEM rules since introduction of the market. This was re-affirmed in the recent SEM Committee decision paper, *‘Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code’* (SEM-11-062)¹². SEM-11-062 stated *“given that it represents the most efficient short- term use of available resources and is consistent with existing dispatch principles, the TSOs shall continue to dispatch the system to minimise production costs of generation, taking account of system security requirements”*.

With the TSOs adhering to the principles of system security and least cost dispatch, confidence in a DBC incentive mechanism can be increased through further transparency around DBC costs. Publication on a quarterly basis of figures for outturn DBC against forecast, commentary on the key drivers and mitigation measures taken by the TSOs will allow market participants to be more confident that perverse decisions are not been made by the TSOs to the detriment of particular stakeholders.

The SEMC agrees that a carefully designed ex-post adjustment mechanism is crucial to the success of any incentive mechanism for DBC, in order to allow the mechanism to cater for unexpected events. This matter is addressed in the next section. A trial period, with no payments or penalties, was examined by the SEMC; however it is view of the SEMC that in order for the incentive to be genuinely effective, revenue incentivisation should be included. The SEMC will look to establish during the 2012/2013 DBC ex-post review as to whether the incentive has effectively worked during that period. At that point changes and modifications may be required to the mechanism.

¹² Please see the following [link](#).

Finally, in relation to the proposal for wind and demand forecasting the SEMC acknowledges that this is something that the TSOs have a direct influence on. It is noted that the TSOs are continually looking to improve wind stability assessment tools (including through the DS3 project), which gives them an ability to forecast wind levels in advance.¹³ This should allow for more accurate forecasting of wind to aid dispatch decisions and in turn reduce the wind predictability revenue requirement of DBC. Therefore, the SEMC wish to pursue the incentivisation of wind forecasting at some point and this is addressed in section 4 below.

General Comments

A number of respondents made the point that some of the current causes of high DBC can be *“alleviated by flexible plant such as pumped storage”*. These respondents believed *“that the best method of minimizing DBC is to incentivise investment in flexible generating and demand side capacity”*. Related to this, some respondents queried why SEM-11-048 did not extend to Ancillary Services incentivisation.

Another respondent questioned exactly what the DBC “pot” would include for the purposes of measuring outturn performance against forecast. The three components of Dispatch Balancing Costs, namely Constraint Costs, Uninstructed Imbalances and Testing Charges are managed by the TSOs and are the subject of SEM-11-048. However, there is significant interaction between Energy Imbalances and DBC and the question is how this interaction should be taken into account in measuring outturn performance.

SEMC response

The SEMC acknowledges that flexible quick-acting plant on the transmission system can help DBC minimisation; however promoting the development of such plant is not the point of this mechanism. The TSOs and RAs are working on this issue through the DS3 project System Services workstream. However, this decision paper sets out a mechanism to incentivise the TSOs to minimise DBC during the tariff year. The incentive is short-term in nature (TSOs taking measures during the tariff year) while the development of flexible quick-acting plant on the transmission system is long-nature, the two are linked but different.

Predictable ancillary services (AS) payments which remunerate technology which can support the increasing levels of wind generation on system can also help alleviate DBC. However, as noted in the consultation paper AS incentivisation is not the purpose of this consultation, but will be considered in future by the SEMC.

It is worth noting that the TSOs have jointly established a programme of activity, ‘DS3’¹⁴, which will undertake significant work to manage the integration of very high levels of instantaneous renewable penetration on the island. This work programme includes enhancing the monitoring of portfolio performance,

¹³ Please see the following link for the TSO *Delivering a Secure, Sustainable Electricity System* workstream: <http://www.eirgrid.com/operations/ds3/>

¹⁴ Ibid.

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. A key part of the programme will include a review of AS and associated payments. New GPIs or compliance incentives will also be considered as part of this programme of work.

The RAs will be involved in this workstream with the TSOs, including the review of AS¹⁵.

As noted above there are a number of components which make up the DBC “pot” so the question of what to incentivise is central to a proper incentive. The table in section 4 sets out what components will and will not be included in the DBC baseline target and the reason why. The ex-post adjustment mechanism is outlined in the following section.

¹⁵ A recent TSOs presentation at an Industry Forum, *Delivering a Secure Sustainable Electricity System*, held can be found [here](#). Information on the workstream can be found [here](#) on the EirGrid website.

4. SEM COMMITTEE DECISION

DBC Incentive design

The SEMC has decided to introduce an all-island DBC incentive mechanism from 1 October 2012 onwards, to operate on an annual basis. This may require certain TSO licence changes in Northern Ireland¹⁶; however the RAs as relevant will work with the TSOs to ensure such changes do not impede the introduction of the new mechanism.

It must be acknowledged that this is a new incentive which will require a 'bedding-down' period; therefore 2012/2013 outturn results will be reviewed by the RAs in early 2014. It should be noted by stakeholders that the incentive mechanism will be monitored over the coming years to determine its effectiveness. Furthermore, the SEMC reserves the right to carry out an audit of the TSOs baseline setting in order to ensure that overly-conservative assumptions are not being used. However, proper management, and indeed reduction of DBC by the TSOs protects and benefits the all-island customer. The SEM Committee believes this measure will promote this action.

The baseline target will be set against the total ex-ante DBC pot. Table 4 below sets out what cost categories are included in the baseline.

Table 4: Cost categories included in DBC ex-ante baseline

Category	Included	Reason
Constraint Costs	Yes	Constraint costs are forecast by the TSOs and approved by the RAs. The aggregate constraint costs incurred depends on a range of factors as described in section 2.
Uninstructed Imbalances	Yes	TSOs influence is solely on the design of UI tolerance parameters such as Tolerances for Over and Under Generation are proposed by the TSOs.
Testing Charges	Yes	Testing charges are proposed by the TSOs and approved by the SEM Committee. The testing charge income into the Imperfections pot is dependent on the number units under test and length of time a generating unit is under test and therefore the time for which additional constraint costs are incurred

¹⁶ CER are given powers, under Section 35 of the Electricity Regulation Act 1999, to accord transmission revenues to the ROI transmission utilities. The according of transmission revenues in NI and amendments to same, require TSO licence changes to be undertaken under Article 3 of the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007.

Energy Imbalances	Yes	Link between Energy Imbalances (EI) and Constraint Costs as EI artificially increases or decreases total Constraint Costs.
Other System Charges	Yes	SNDs, Trip Charges and GPIs are proposed by the TSOs and approved separately by the CER and NIAUR. The amount of OSC income received into Imperfections pot is dependent on level of non-compliances of generating units and is related to the additional costs as a result of the associated performance of generator units.
SO-SO Trades	Yes	For system security, the TSOs can trade with GB TSO in line with Trading and Settlement Code.
Make Whole Payments	No	Independent of dispatch and DBC.
Capacity Imbalances	No	Completely outside the influence of the TSOs.
Other Imperfection Charge components ¹⁷	No	Completely outside the influence of the TSOs.

SEM-11-048 proposed a set of potential targets, payments and penalties for the 2011/2012 tariff period. Consideration has been given to responses made to the consultation and discussions have taken place with the TSOs during the consultation phase to ensure that final targets can be effective and are easily implemented. The SEM Committee recognise that this is the first year of the incentive mechanism; however in order for it to be successful, it is important that the targets are actually achievable.

The RAs have further considered the parameters as consulted upon in SEM-11-048 and have come to the conclusion that they were inappropriate. For example, if the incentive had been in place for the 2011/2012 tariff period (DBC allowance of €142.8 million which excludes K-Factor), under the proposed SEM-11-048 targets the full award for the TSOs would have been €2.9 million (€2.175 million to EirGrid and €0.725 to SONI) and the full penalty would have been €1.43 million (€1.073 million to EirGrid and €0.357 million to SONI). To put the potential EirGrid DBC award into context, it would be 30% more than the reward received if it achieved all of its 2011 ROI-only incentive targets.¹⁸

¹⁷ Market Interest and Foreign exchange elements as set out in section 4.155 of the Trading and Settlement Code.

¹⁸ Please refer to footnote 3.

Therefore, the RAs believe that the parameters outlined below are more appropriate. They include as per SEM-11-048 a deadband of 7.5% either side of the baseline, with a lower and upper bound of 20%. Again under the 2011/2012 DBC allowance of €142.8 million, if the incentive in table 5 below had been in place and upon completion of the ex-post review the TSOs had achieved the full target, they would have received €1.8 million. Alternatively, if the TSOs had faced the full penalty, the charge to the TSOs business would have been €0.9 million. The RAs consider that these parameters are more suitable for an incentive programme in its first year and are not overly excessive for the all-island customer, or the TSOs.

The outturn results for 2012/2013 will be analysed by the RAs and if there is a necessity to strengthen or weaken the targets, payments or penalties the SEMC will take steps to do so. Removal of the incentive at that time may also be considered appropriate. However, the SEMC believes that the targets in table 5 below are relatively tough, easy to measure, transparent to stakeholders and reflective of the ‘asset-light’ nature of the TSOs. Furthermore these targets, payments and penalties should provide discernable benefits to the all-island customer through DBC reduction, compared to that which would have otherwise occurred.

These payments and penalties will be administered across both TSOs on a 75:25 split basis, upon ex-post review. Payments and penalties upon completion of the ex-post review will be fed through to the 2015 annual TUoS revenue allowances in ROI and NI.

Table 5: DBC incentive for 2012/2013 tariff period

€m's	Lower Bound	Dead Band	Upper Bound	Below Target	Above target
Dispatch Balancing Costs	7.5%-20% below baseline.	7.5% below and above the baseline.	7.5%-20% above baseline.	TSOs retain 10% of every 2.5% below.	TSOs penalised 5% of every 2.5% above.

Ex-post review

As noted in SEM-11-048 it is important that any ex-post review would need to take into account any external factors which heavily influenced DBC outturn during the tariff period, e.g. unforeseen long-term outage of plant and other High-Impact Low-Probability events (HILPs). An effective ex-post adjustment mechanism should ensure the protection of both the TSOs and the all-island customer from potential windfall gains or losses, as it would remove some of the risk for events outside of the TSOs' influence.

Table 6 below sets out the factors which will be taken in account in the RAs ex-post review.

Table 6: Ex-post review factors

Factor	Level of effect on DBC	Ex-ante Baseline Adjustment
Change in SEM market rules or any RA decision affecting DBC	Automatic shift of any percentage.	<p>SEM market rules can change during a tariff period after the ex-ante allowance has been made. These changes may have an effect on DBC outturn.</p> <ul style="list-style-type: none"> • If the impact of a market rule change results in any change on DBC outturn the baseline will be adjusted¹⁹.
Changes in Demand Forecast/Exchange rates/Fuel prices (inc. bids)/Wind generation	<p>3%+ either side of DBC baseline.</p> <p>Or</p> <p>Total 8%+ either side of DBC baseline.</p>	<p>Forecasts for each of these categories are included in the Plexos modelling of constraint costs by the TSOs. In the case of Wind forecasting a specific provision is made for the tariff period.</p> <ul style="list-style-type: none"> • If the impact of the difference between forecast and actual for each category on DBC outturn is 3%+ of the baseline (in either direction), it will be adjusted²⁰. • If the impact of the difference between forecast and actual of all four categories in combination on DBC outturn is 8%+ of the baseline (in either direction), it will be adjusted²¹.
High Impact Low Probability (HILP) events: long-term unforeseen outage of Generators, key reserve provider or transmission plants.	5%+ of DBC baseline or €5 million per event	<p>HILPs events are rare transmission, generation or interconnector outages that lead to significant increases in constraint costs. Plexos does not model major HILP events.</p> <ul style="list-style-type: none"> • If a Generator, key reserve provider or transmission plant going on unforeseen long-term outage (including single and multiple HILP events) results in DBC outturn

¹⁹ For example, the ex-ante baseline for Tariff Year X is €100 million. The measured impact of a market rule change is €2 million (i.e. 2% of the baseline). Therefore the baseline for Tariff Year X is adjusted by €2 million, either to €98 million or €102 million.

²⁰ For example, the ex-ante baseline for Tariff Year X is €100 million. The impact of the difference between forecast and actual fuel cost prices solely is €5 million (i.e. 5% of the baseline). Therefore the baseline for Tariff Year X is adjusted by €5 million, either to €95 million or €105 million. If the impact of the difference had been €2 million (i.e. 2% of the baseline), the baseline would not have been adjusted.

²¹ For example, the ex-ante baseline for Tariff Year X is €100 million. The impact of the difference between forecast and actual of all four categories in combination is €12 million (i.e. 12% of the baseline). Therefore the baseline for Tariff Year X is adjusted by €12 million, either to €88 million or €112 million. If the impact of had been €6 million (i.e. 6% of the baseline), the baseline would not have been adjusted.

		increasing by 5%+ or €5 million from the ex-ante baseline, it will be adjusted ²² .
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The RAs will, as part of the ex-post review, examine any significant factors not identified above which affected DBC outturn. Combinations of the above factors which lead to DBC outturn being 10% either side of the ex-ante baseline will also be reviewed in detail by the RAs. The SEMC consider the ex-post review mechanism outlined above best protects the TSOs and the all-island customer potential windfall gains or losses. In doing so it leads to a more effective incentive for the TSOs.

TSOs reporting and transparency measures

As noted in SEM-11-048 the SEM Committee considers that it is important that clarity around levels of DBC is provided to market participants. Respondents to SEM-11-048 made this issue very clear in their respective submissions. This will allow participants to understand the drivers behind DBC, the impact that DBC has on all-island customers and the steps being taken by the TSOs to reduce DBC. Informative TSO seminars (similar to that held in EirGrid offices 26 May 2011) on DBC also help promote this.

In order to increase transparency around DBC, the SEM Committee has decided that the TSOs will develop a report template for submission to the SEM Committee by end June 2012, which outlines a regular update on levels of constraints, drivers behind constraints, mitigating measures being taken and other information or commentary, which the TSOs believe will aid transparency in this area. The RAs will review this template on behalf of the SEMC and make appropriate changes in order to ensure useful information is provided. Transparency around DBC will ensure that participants see that perverse decisions are not being made by the TSOs and it will promote confidence in the new incentive mechanism.

The SEMC also asks that as part of this template the TSOs include a 'wind forecasting accuracy' section which will outline the performance of the forecast against actual wind generation. The inclusion of this parameter in the reporting template is with a view to a potential 'wind forecasting' incentive being added by the SEMC to the general DBC incentive at a later date.

Following approval of this report template by the SEM Committee, the TSOs will be required to publish the report on a quarterly basis on their websites. The intention is that the first of these reports will be submitted to the SEMC by end Q3 2012 and published by the TSOs in calendar year Q4 2012. It should be noted that Quarterly reports will be based on Initial settlement figures. Resettlement figures invoiced within that quarter will be included, but not scheduled resettlement in respect of the Trading days that fell within the quarter.

²² For example, the ex-ante baseline for Tariff Year X is €100 million. The impact of three Generation plants going on unforeseen long-term outage is €10 million (i.e. 10% of the baseline). Therefore the baseline for Tariff Year X is adjusted by €10 million, either to €90 million or €110 million. If the impact of the difference had been €4 million (i.e. 4% of the baseline), the baseline would not have been adjusted.

5. CONCLUSION & NEXT STEPS

DBC are a significant cost passed on to the all-island customer every tariff year. DBC represent nearly 100% of the Imperfections Allowance²³, a significant cost which is passed on to the all-island customer. In the tariff period 1 October 2009 to 30 September 2010 DBC represented nearly 5% of the entire value of the SEM²⁴. A similar percentage was evident for the last tariff period 1 October 2010 to 30 September 2011.

The Imperfections Allowance for the current tariff period 1 October 2011 to 30 September 2012 is €185.2 million, which includes a large k-factor (€54.5 million) from the previous tariff period. The increase is mainly due to fuel costs increases over the last 12 months.

In light of the points made in Section 2 above, the SEMC believes it prudent to introduce an incentive mechanism on the TSOs to manage all-island DBC from the period 1 October 2012 onwards.

The SEMC believes that the incentive mechanism outlined above takes account of the current industry structure and the degree to which DBC are outside of the influence of the TSOs through asymmetric targets, dead-bands and a defined ex-post review process.

The next steps are as follows:

- The incentive in section 4 above will apply for the tariff period 1 October 2012 to 30 September 2013.
- NIAUR will engage with SONI to ensure any required TSO licence changes are implemented.
- The TSOs will submit their DBC report template to the RAs by mid July 2012 for review. The first report will be submitted to the SEMC by end Q3 2012 and published by the TSOs in Q4 2012.
- An ex-post review of 2012/2013 DBC by the RAs will take place in early 2014, with the resultant incentive payment/penalty applying to 2015 ROI TUoS and NI SSS revenues respectively.

Queries to this SEM Committee publication should be submitted to Jamie Burke (jburke@cer.ie) the CER.

²³ Please refer to SEM-11-060.

²⁴ Please see the following [link](#).