Harmonised Ancillary Services Recommendations Paper

Tariff Year
1st October 2015 to 30th September 2016

29th May, 2015

EXECUTIVE SUMMARY

EirGrid and SONI (the TSOs) have consulted on the annual rates and charges for the Harmonised Ancillary Services (HAS) for the tariff year 1st October 2015 to 30th September 2016. The HAS consultation paper for 2015-2016 was published on 20th February 2015 and the TSOs have received comments from six (6) respondents. This paper summarises the responses received and provides clarification where required. Having reviewed the responses and taking into account the participants views, the TSOs propose the following recommendations:

1. The TSOs will develop a transparent, technology independent System Services Procurement Policy to align with regulatory decisions and the European Network Codes. In the interim until DS3 implementation, any interested parties who wish to contract for existing HAS products should contact the TSOs.

2. The TSOs will engage with Service Providers to investigate and develop communication process changes that may be required regarding ramping before an under frequency event – pre event assessment.

3. The blended inflation rate of 1% as proposed be implemented.

No other changes are recommended for this tariff period.

ABBREVIATIONS

ASP	Ancillary Service Provider
AS	Ancillary Service
CER	Commission for Energy Regulation
DS3	Delivering a Secure Sustainable System
HAS	Harmonised Ancillary Services
NI	Northern Ireland
NIAUR	Northern Ireland Authority Utility Regulation
POR	Primary Operating Reserve
TSO	Transmission System Operator
RA	Regulatory Authority
RoCoF	Rate of Change of Frequency
SEM	Single Electricity Market
SONI	System Operator Northern Ireland
SOR	Secondary Operating Reserve
TOD	Technical Offer Data
TOR1	Tertiary Operating Reserve 1
TOR2	Tertiary Operating Reserve 2

1. INTRODUCTION

The purpose of this paper is to recommend to the RAs in Ireland and Northern Ireland the proposed rates and HAS changes for the 2015-2016 tariff year, taking into account the comments received by the TSOs on the HAS consultation paper[1].

In the consultation paper, the TSOs provided clarification on ramping during and after an under frequency event, an overview of their investigations into the pre-event assessment of a unit ramping before an under frequency event and also the investigation into the influence of Rate of Change of Frequency (RoCoF) on Primary Operating Reserve (POR) performance assessment for synchronous generation units currently under review by a Grid Code panel working group.

As part of the consultation the TSOs also provided an update on the refinement to the operating reserve calculation, the status of any contracts for the flexibility services as discussed in previous consultations and a progress update on the refinement of the existing interconnector static frequency service to become a dynamic frequency response service.

Lastly, the TSOs provided an update on the RoCoF incentive.

The TSOs received responses from the following parties:

Party	**Abbreviation**
Bord Gáis Energy	BGE
ESB Generation and Wholesale Markets	ESB GWM
Power NI Energy Ltd Power Procurement Business	PPB
Moyle Interconnector Ltd	MIL
Irish Wind Energy Association	IWEA
ENERNOC Activation Energy	EAE

No confidential responses were received. Copies of the responses received have been attached to this recommendations paper.

The TSOs welcome participant's comments, proposals and views in this consultation.

[1] Harmonised Ancillary Services Consultation 20th February 2015, available at www.EirGrid.com and www.soni.ltd.uk.

2. ANCILLARY SERVICES CONSULTATION RESPONSES

2.1 DS3 System Services, AS Policy and AS Reporting

The System Services workstream, which is being carried out as part of the DS3 Programme, is separate from the annual HAS consultation. The objective of the workstream is to put in place System Services arrangements that facilitate the efficient procurement of sufficient services for the secure operation of the power system both in the short-term and long-term, while complementing the other aspects of the wholesale electricity market.

In the interim, an AS Procurement Policy, which sets out the high level principles for amending existing AS service agreements and for new providers, is being developed. In addition, a monthly report is published on the TSOs' websites which shows reserve payments, charges for service under provision, reactive power payments and synchronous compensation payments.

2.1.1 Respondents' Comments

Three comments were received (PPB, ESB GWM and EAE) in relation to DS3 system Services, AS Policy and AS Reporting.

PPB welcomed the work which has been undertaken by the TSOs in relation to DS3. The respondent urged the TSOs to explore opportunities and more expedient methods to procure new Ancillary Services (AS), where it will provide material value for customers in the period up to the implementation of the new DS3 System Services. The respondent noted that none of the four short term flexibility AS initially consulted upon in 2011-2012 have been procured and that AS providers have been unable to realise the value associated with these services. Given the level of counter-trading on the interconnector there must be a strong economic case for flexible mode operation and lower minimum generation services.

PPB also expressed concern in regard to the future regulated tariff for 2016-2017 being based on the current HAS budget of €60m which was derived from the original system services scheme which has never been reassessed and believes it does not properly remunerate the existing system service provider. The respondent suggested the TSO should consider benchmarking future rates against similar products in Great Britain.

Finally, the respondent states that the published TSO AS report is inadequate as it does not give sufficient transparency for providers and expressed concern in the lead up to DS3 implementation where there will be a requirement to bid in these ancillary services.

ESB GWM welcomed the introduction of an AS Procurement Policy as it provided clarity to the TSO's contracting for system services, however the respondent expected a full policy document to be produced by the TSOs giving more detail than provided in this consultation. The respondent would be keen to know the relevant weighting of each of the factors as this would allow the service provider to better understand the TSOs' requirements for procuring services, facilitate proper budget planning and allow programs to be developed and executed commensurate with the service being sought.

EAE commented that Demand Side Units (DSUs) have been providing services to the system and that some of their customers could provide much faster demand reduction than dispatch currently requires. The respondent asked the TSOs, as part of the AS procurement review, to make provision for DSUs. This would be a positive step as we move towards offering further services under the DS3 project.

2.1.2 TSOs' Response

The DS3 System Services market arrangements will be designed in detail and implemented in line with the key milestones set out in the SEM Committee's DS3 System Services Procurement Design and Emerging Thinking decision paper (SEM-14-108).

In addition, the TSOs have prepared and published a draft TSO Procurement Strategy document which sets out the TSOs' approach to the implementation of the DS3 System Services procurement design, the estimation of required volumes and the approach to determining the level of volumes to be contracted under long term contracts. Given that there are numerous aspects of the procurement design and the corresponding methodologies to be applied that are currently unknown and which will need to be developed, the document is intended to be a "living" document that will be updated periodically during the course of the DS3 System Services Implementation Project as decisions are made and key aspects of the design become clearer.

The TSOs recognise the importance of clarity, for existing and potential system service providers, around the volume of each system service to be procured. The TSOs are progressing a workstream focused on the calculation of forecast DS3 System Services volumes. The TSOs are also currently developing the scenarios to be used for volume calculation and the methodology to be employed and will hold consultations on these items during 2015. Following approval of the scenarios and methodology by the SEM Committee, the initial volume analysis will be conducted with the results planned to be published and consulted upon in early 2016.

In response to the PPB comment on an AS requirement for minimum generation and flexible mode operation, since the consultation 2011-2012, the TSOs have only two providers contracted for short term minimum generation or parking services with no further uptake. With regard to flexible mode operation, the TSOs have contracted with one provider for flexible mode operation.

The TSOs publish an AS report on payments and charges under the existing HAS arrangements on a monthly basis and do not propose to make any additional changes to the reporting structure prior to the implementation of System Services.

Prior to the implementation of System Services, the TSOs have indicated that they may contract for additional services on a case by case basis if they believe there is value for customers. In order to improve and make the process more transparent and independent of technology type, a further AS procurement policy will be developed as part of the DS3 System Services programme which will also ensure compliance with the European Network Codes.

2.1.3 TSOs' Recommendation

The TSO will develop a transparent, technology independent System Services procurement policy to align with regulatory decisions and the European Network Codes. In the interim until DS3 implementation, any interested parties who wish to contract for existing HAS products should contact the TSOs.

2.2 EXISTING AS SERVICES

The TSOs, taking into account their respective statutory obligations and licence conditions, continuously review AS services to ensure that they deliver efficiency, reliability and value for money to electricity customers.

The TSOs are proposing to continue the current AS services and rates for this upcoming tariff year 2015-2016 with the inclusion of the assumed inflation rate.

2.2.1 Respondents' Comments

PPB states that as the RoCoF and occurrence of frequency transients increases due to the increase in wind and lower inertia, the generators will be exposed to greater risk to their plant. The respondent commented that the penalties are increasing but the TSO has not been provided with any incentive to keep the number and magnitude of RoCoF and frequency transient events to a minimum. The respondent believes that the TSOs should be transparent and report on the level of each category of reserve to give confidence to the industry that the license obligations are met.

2.2.2 TSOs' Response

Frequency transients mainly arise as a result of unit(s) tripping. The duration and magnitude of these events are dependent on which unit or units tripped, the system conditions and the reserve response of other units and reserve providers. The TSOs rely on the expected response from reserve providers to manage the magnitude of RoCoF and magnitude of the frequency transients. The TSOs will continue to take necessary actions as required by their respective Licences to operate the system in a safe, secure, reliable and economic manner.

2.2.3 TSOs' Recommendations

The TSOs are proposing to continue the current AS services and rates for this upcoming tariff year 2015-2016 with the inclusion of the assumed inflation rate.

2.3 RAMPING DURING AND AFTER AN UNDER FREQUENCY EVENT

It is the TSOs' expectation that during an under frequency event generating units will increase MW output to assist restoration of the system frequency shortfall and respond in line with the frequency governor droop set out in the technical parameters as agreed in the HAS agreement. The TSOs have observed in some cases generating units that were ramping pre-event continuing to ramp (MW output increase or decrease) once the system frequency has been restored. After a generation shortfall event some elements of the pre-event generation will require to be re-dispatched. Units that resume ramping to pre-event dispatch levels especially in a downward direction threaten the restoration of system security in the already stressed immediate post event environment. The TSOs will continue to monitor and discuss this with generators where necessary.

2.3.1 Respondents' Comments

ESB GWM are of the opinion that the TSOs' proposal relating to ramping before the frequency event can be done but is difficult to implement in practice and has a number of implications such as Uninstructed Imbalances (UI), changes to current dispatch procedures and subsequent consultation/rule changes to the Trading and Settlement Code (T&SC). The respondent reiterated their response from last year that frequency related re-dispatch should be done in a centralised fashion rather than in an ad hoc fashion by individual generators implementing new set points themselves and hence would avoid the potential for UI which may have otherwise materialised.

2.3.2 TSOs' response

In the consultation paper, the TSOs outlined the expected behaviour/response of a generating unit ramping during and after an under frequency event. As stated in the Grid Code, the event requires a generating unit response via free governor action and once this has been provided, the machine should maintain this new frequency related output until they receive new dispatch instructions from the TSOs. To clarify, after the event, the TSO will issue new dispatch instructions, if the unit had been ramping pre-event, as required.

2.3.3 TSOs' Recommendation

No recommendation is being given as part of this consultation.

2.4 RAMPING BEFORE AN UNDER FREQUENCY EVENT – PRE EVENT ASSESSMENT

It has been raised with the TSOs' that the existing reserve provision calculation has a limitation whereby if a unit is ramping up or down pre-event then the calculation may incorrectly calculate the expected output of the unit. The existing design analyses the pre-event output and frequency in the period 30 to 60 seconds before the event start time.

If the unit is ramping pre-event then the pre-event output and frequency should be considered closer to the event start time and averaged over a shorter timeframe. The TSOs are proposing that if a unit is ramping pre-event, then the pre-event output and frequency is the average from 3 to 5 seconds before the event start time instead of the existing design of 30 to 60 seconds.

2.4.1 Respondents' Comments

Two comments were received (ESB GWM and PPB) in relation to ramping before an Under Frequency Event – Pre Event Assessment.

ESB GWM sees this proposal as an improvement on the current rules and would support its introduction albeit with a review period in the future to assess its suitability.

PPB welcomed the change, however the respondent believes there should also be flexibility to cover any other occasion where instability in the output or frequency does not give a fair representation of the pre-transient conditions and the pre-event assessment point should also be adjusted if required.

2.4.2 TSOs' Response

The TSOs proposed that in the first instance, reserve charges will continue to be assessed for all frequency events below 49.5 Hz under the current HAS arrangement with pre-event values of output

at the average from -60 to -30 seconds. However, in the event that a generating unit is ramping prior to the start of an under frequency event and if the generating unit believes that they should be assessed at a different pre-event value, then the TSOs will consider pre-event values closer to the event time in consultation with the service provider. It should be noted that the onus will be on the service provider to indicate to the TSO that there was such an event.

2.4.3 TSOs' recommendations

The TSOs will engage with service providers to investigate and develop communication process changes that may be required.

2.5 INFLUENCE OF ROCOF ON POR PERFORMANCE ASSESSMENT FOR SYNCHRONOUS GENERATION UNITS

Following investigations of generation units' response to recent frequency transients, the TSOs have concluded that the effect of a unit's inertia response should be taken into account as part of the assessment of POR in frequency transient events where the frequency nadir occurs before the start of the POR period (5 seconds) and there is a subsequent rapid rise in system frequency within the POR timeframe.

The POR response assessment, as contained in the HAS contracts, is carried out at the frequency nadir during the POR time period 5 to 15 seconds. If the frequency nadir is before 5 seconds the response assessment is carried out at 5 seconds. With a frequency nadir that occurs before 5 seconds the frequency will be rising again at 5 seconds and the unit will be partly absorbing energy from the system, the volume depending on the generators inertia characteristics and the positive RoCoF. The inertia effect with absorption of energy will reduce the indicated POR performance at 5 seconds.

A Grid Code Review Panel working group has been set up which aims to develop an assessment methodology to be used by the TSOs, when deciding whether a generation unit has complied with its required POR response, under the HAS agreement. It is anticipated that the recommendation from the working group will provide clarity for the industry and allow policy to be developed and implemented.

In the interim, the TSOs will work with the service provider(s) regarding the inertia during POR assessment on all applicable chargeable under frequency events.

2.5.1 Respondents' Comments

PPB welcomed this new piece of analysis. The respondent believes that this inertia performance should be rewarded/enhanced through the HAS 2015-2016 arrangement and would be a rational interim step towards DS3.

2.5.2 TSOs Response

If the nadir is prior to 5 seconds for an event, the TSOs are currently holding the charges on POR non-performance on a temporary basis, until the working group outcome on the methodology for calculation of the inertial component is decided. For events where the nadir is at or after 5 seconds, reserve under provision charges will apply. The work on this methodology is anticipated to be

concluded in 2015. Any changes relevant to under provision charges in the HAS contract will be implemented accordingly.

2.5.3 TSOs' Recommendations

No recommendation is being given as part of this consultation.

2.6 DYNAMIC FREQUENCY RESPONSE FROM AN INTERCONNECTOR

The desire to change the existing interconnector static reserve functionality came about from increasing operational issues occurring on the power system. There is evidence that following loss of generation events there are overshoots beginning to be experienced resulting in excessive frequency recovery. Preliminary investigations have identified that providing a dynamic frequency response modification to the existing interconnector static reserve would help alleviate this issue.

The TSOs have been investigating recent low frequency transients where the frequency has recovered rapidly and to a value above 50 Hz within the POR timeframes partly due to the influence of fixed amounts of static reserve. To provide an improvement in frequency control during transients the TSOs are proposing to refine the existing provision of static reserve from the interconnectors to become a dynamic product that would only be delivered after a frequency threshold (high or low) has been breached. This frequency response would be provided in the same manner as a turbo-generator response having a settable governor droop (potentially 4%) and, similar to a machine, there would be a cap on the quantity of reserve that would be provided. This would enable the interconnector reserve to be utilised in a much more intelligent manner and would therefore provide enhanced benefits to both the TSOs and the consumer. The TSOs consider the value to the system to be less than that provided by a dynamically regulating conventional source as a significant threshold must be breached, either above or below the nominal 50 Hz, before any triggering of the reserve actually takes place.

In the 2014-2015 recommendation paper[2] the TSOs proposed to conduct a more robust technical analysis to further determine the benefits from static and dynamic interconnector frequency response; this technical analysis is on-going. A separate consultation will be conducted by the TSOs prior to making any firm recommendation to the SEM Committee. The consultation will be included in the DS3 system service changes or if required in a separate consultation. It is the TSOs' view that if ultimately there are economic benefits available to customers through operation of the interconnectors, the change should be implemented.

2.6.1 Respondents' Comments

Two comments were received (ESB GWM and PPB) on the Dynamic Frequency Response from an Interconnector.

ESB GWM expressed concern in relation to the EirGrid Group owned asset, the East-West Interconnector, as a paid provider of Ancillary Services as it is a material competitor in dispatch for the provision of Ancillary services.

[2] Harmonised All-Island Ancillary Services Rates Recommendation Paper; 9 July 2014.

PPB commented that the TSOs proposed change may mean that other generators fail to respond in the contracted manner and are penalized. The respondent stated that they would expect a consultation on the proposed change with industry and a careful analysis by the TSOs prior to introduction and payment for such a service.

Both respondents (ESB GWM and PPB) questioned if the same criteria used to assess the merits of utilising the interconnector would also be used to assess other technology types and reward them with a new Ancillary Service.

2.6.2 TSOs' response

The TSOs, in the consultation paper, provided an update in relation to the robust technical analysis to further determine the benefits from static and dynamic interconnector frequency response. This work is on-going and expected to be complete in 2015. Furthermore a separate consultation will either be included in the DS3 System Services changes or in a separate consultation depending on the urgency required. It remains the TSOs' view that ultimately, where there are economic benefits available to customers through operation of the interconnectors, the change should be implemented.

In response to the participants' questions with regard to the criteria used to assess and contract Ancillary services for other technology types, the TSOs would like to refer the respondents to the on-going work within the DS3 programme. Under the DS3 program[3], the TSOs are looking at system services required to operate the power system with increasing levels of non-synchronous sources of energy and within this a technology neutral services scheme is proposed. However, before new technologies can avail of these DS3 services, when approved by the SEM Committee, they will need to demonstrate that they can physically and reliably provide these services.

2.6.3 TSOs' Recommendations

No recommendation is being given as part of this consultation, as a separate consultation will either be included in the DS3 System Services changes or in a separate consultation depending on the urgency required.

2.7 ROCOF INCENTIVE

It is the TSOs' expectation to introduce a RoCoF incentive in line with the RAs' decision.

The RAs' RoCoF modification to the Grid Code decision paper[4] acknowledges that in addition to the costs associated with the studies there may be operational cost implications with higher RoCoF events for generators.

[3] The deployment of renewable energy sources (RES) in the electricity sector has been increasing steadily in recent years and Ireland and Northern Ireland are committed to increasing the level of renewable electricity consumption to 40% by 2020. The EirGrid Group is at the forefront of this change and is working with all industry stakeholders to facilitate these ambitious renewable electricity targets. To help manage the operation of the power system over the coming years a programme of work has been established entitled "Delivering a Secure Sustainable Electricity System (DS3)". Further information can be found at www.eirgrid.com/operations/ds3

[4] Rate of change of Frequency (RoCoF) Modification to the Grid Code Decision paper CER/14/081 published 4th April 2014. Decision Paper on the Rate of Change of Frequency Grid Code Modfication publisehd 7th May 2014.

On 29th January 2015, the SEM Committee requested the TSOs to develop and submit a proposal for a RoCoF rate or such other mechanism as the TSOs may recommend to act as an incentive for generators to complete compliance investigations in a timely manner. The TSOs will carry out this work in 2015 with a separate consultation.

2.7.1 Respondents' Comments

Two comments were received (ESB GWM, and BGE) in relation to RoCoF Incentive.

ESB GWM supports the cost recovery for RoCoF and commented on the challenges facing the TSOs to adequately incentivise compliance with the new standard when generators still do not know what they have to pay to comply. It may be the case that the cost of compliance for a certain unit is a multiple of the cost for another unit. In this instance, a mechanism of cost recovery for each generator would be more suitable and economical overall compared to an incentive scheme which has to cover the most expensive cost but pays this to all.

BGE expressed disappointment that no RoCoF incentive rate was proposed in this consultation. The first tranche of priority generators are expected to conclude their RoCoF studies within the timeframe of the proposed 2015-2016 rates. The exclusion of the proposed RoCof related rates fails to recognise the costs that generator are incurring, particularly those in the priority listing, as a result of the compliance testing programme and the risks facing these generators as a result of the expected increase RoCoF events.

As proposed in the consultation paper, the introduction of a RoCoF ancillary service is to act both as an incentive to complete the RoCoF studies and to compensate for increased operation and maintenance cost associated with higher and more frequent RoCoF events. The respondent urges the TSOs to work with generators to better understand the type and magnitude of costs expected as a result of the change in RoCoF standard and to develop a rate to reward compliance with a higher RoCoF standard as part of the decision paper for the 2015-2016 HAS rates. Recognising that the studies will not be complete, if the rates are to be truly an incentive for compliance, they should be available and applicable throughout the study period for those generators actively engaging. At this juncture, a rate related to the current expected costs of compliance may be appropriate. To the extent that further costs are identified as part of the study process, these can be discussed and consulted upon as part of next year's annual review process.

2.7.2 TSOs' Response

The TSOs are currently working within the framework set out in the RA's decision papers. Analysis and assessments are being carried out to determine the mechanism and volume of cost recovery that should be put in place for generators as a result of the increased RoCoF standard.

2.7.3 TSOs' Recommendation

No recommendation is being given as part of this consultation, as this will be addressed in DS3 System Services.

2.8 PROPOSED RATES AND CHARGES

The rates and charges for HAS are proposed in tables 2.8.1.1 and table 2.8.1.2 below. Table 2.8.1.3 provides the HAS rates for the synchronous compensation service and the static frequency service.

The Harmonised Ancillary Services rates are initially calculated in Euros. In determining the associated sterling rates, the TSOs apply a methodology consistent with that applied under the Trading and Settlement Code for the calculation of the annual capacity exchange rate i.e. the average of the forwards rates for the forthcoming year as taken over a period of 5 days prior to tariff and payment setting.

In the Harmonised Ancillary Services rates and Other System Charges decision paper for 2011-2012, the SEM Committee was satisfied that the exchange rate methodology is aligned to that utilised in the SEM. The TSOs have continued to use the same methodology as approved for the tariff year 2014-2015 using the 5-day average rate based on the last five working days of July. All rates and charges increase by 1% with the blended inflation rate[5].

In the past the TSOs have received comments in relation to exchange rate volatility both within and between years and the degree to which this should be reflected in the derivation of HAS rates. In terms of movement in exchange rates between years, the TSOs recognise that in single rate setting in a dual currency context the relative payments to generators in one or other jurisdiction, as well as the associated costs to customers across the island, has the potential to vary as and when exchange rates move. This means that in the context of euro payment setting, sterling participants may see the corresponding sterling payment rates rise or fall over time between years.

The TSOs recognise this issue. However, the very premise of the HAS arrangements is the provision of single harmonised payment rates to all participants across the island; the annual tariff and payment setting affords generators stability and predictability with respect to payments. To reflect longer term exchange rate movements between jurisdictions would be to deviate from this core principle.

In this consultation paper the TSOs have not proposed any such amendments and updated the rates for a blended estimate of forecast inflation in the two jurisdictions.

The rates proposed are displayed with 2 decimal places in Euro. The TSOs would like to clarify that 4 decimal places are used in the calculation of the inflationary Increase.

[5] Current inflation forecasts in the UK, as published by bodies such as the Office of Budgetary Responsibility (OBR) indicate UK inflation of the order of 2-2.5%. Forecasts of HICP inflation in Ireland are general around 0.5%. On this basis, and recognising the relative balance between Ireland and Northern Ireland, and indeed the somewhat lower than originally forecast expected outturn inflation for 2014/15 the TSOs' view is that a blended rate of 1% for the forthcoming 2015/16 period is appropriate.

Service	Categories	2014-2015	2015-2016
Reserve	Primary Operating Reserve	€ 2.34 / MWh	€ 2.36 / MWh
	Secondary Operating Reserve	€ 2.24 / MWh	€ 2.27 / MWh
	Tertiary Operating Reserve 1	€ 1.87 / MWh	€ 1.89 / MWh
	Tertiary Operating Reserve 2	€ 0.93 / MWh	€ 0.94 / MWh
	Replacement Reserve (Synchronised)	€ 0.20 / MWh	€ 0.21 / MWh
	Replacement Reserve (De-Synchronised)	€ 0.54 / MWh	€ 0.54 / MWh
Reactive Power	Reactive Power Lagging	€ 0.13 / MVArh	€ 0.14 / MVArh
	Reactive Power Leading	€ 0.13 / MVArh	€ 0.14 / MVArh

Table 2.8.1.1: Proposed Harmonised Ancillary Service Rates for 2015-2016 tariff year

Reserve Parameter	Rate
Primary Operating Reserve Charge Period	30 days
Secondary Operating Reserve Charge Period	30 days
Tertiary Operating Reserve 1 Charge Period	30 days
Static Frequency Charge Period	30 days
Event Frequency Threshold	49.5 Hz
Reserve MW Tolerance[6]	1 MW
Reserve Percentage Tolerance	10 %

Table 2.8.1.2: Charges for non-provision of all reserve categories for 2015-2016 tariff year

Services	Categories	2014-2015	2015-2016
Flexibility Services	Synchronous Compensation	€2.98 / hr	€3.01 / hr
Reserve	Static Frequency Service	€3.69 / MWhr	€3.73 / MWhr

Table 2.8.1.3: Proposed HAS rates for Synchronous Compensation and Static Frequency service for 2015-2016 tariff year

2.8.1 Respondents' Comments

Four comments were received (PPB, IWEA, BGE and MIL) in relation to proposed HAS rates and charges.

PPB welcomed the rate increase in line with inflation. The respondent stated that the HAS payment rates were derived from the original System Support Services Arrangements (SSSA) that operated in Northern Ireland (NI) and have never been reassessed. The respondent believes it does not properly remunerate the existing system service provider and the rates should be benchmarked against similar products in Great Britain (GB). The respondent expressed concern in relation to the application of volatile exchange rates for AS provides in NI which, with the recent strengthening of

[6] The Reserve tolerance will be greater of the Reserve Percentage Tolerance of the expected Reserve provision or the Reserve MW Tolerance when a charge is applicable.

Sterling relative to the Euro, will mean NI service providers will be receiving less payment for AS in 2015-2016 than in 2014-2015. Given that the original rates were derived from NI SSSA rates in Sterling, the respondent proposed that the NI rates for 2015-2016 should be the 2014-2015 rates in Sterling uplifted by inflation.

IWEA supports the rates proposed by the TSOs at this time.

BGE requests more details on the sources of both the UK and Irish inflation rates and the TSOs methodology of blending the two rates. Based on the available data from the relevant authorities in GB and Ireland, it is difficult to reconcile the 1% proposed rate. The respondent also requests the TSOs to clarify 'general' forecast for inflation in Ireland from footnote 11 in the consultation paper as it is difficult to reconcile the 0.5% proposed rated from looking at the forecast from the Department of Finance.

MIL commented that while the approach of referencing publications by bodies such as the OBR appears broadly correct, there is insufficient information to allow market participants to validate the TSOs' approach. To assist transparency, the exact reports should be referenced together with their dates, as inflation forecasts do vary over time. In addition, it would be helpful if any TSO calculations (or statement of a qualitative approach) around the blended rate was published. Notwithstanding that, the preferred approach is to have harmonised tariffs across jurisdictions, the respondent does not feel that the application of a blended inflation rate produces an equitable result. A blended rate means that parties in the jurisdiction with low inflation will be over compensated relative to parties in the jurisdiction with higher inflation. An alternative proposal is that the tariff should be unfettered by the effects of inflation or exchange rate adjustment and should be "re-baselined" in Euro. It should then be adjusted for Ireland inflation for Euro participants and for both currency and United Kingdom (UK) inflation for Sterling participants. This would allow the continuation of Harmonisation tariffs while producing an equitable result for all.

2.8.2 TSOs' Response

In proposing HAS rates, the TSO's are following the same approach previously approved by the RAs; that is to uplift current rates (€) by a blended inflation rate and determine the £ equivalent as per the RA HAS 2011-12 decision paper which stated that the exchange rate methodology is to be aligned to that utilised in the SEM. The only amendment to this being a change to the 5 day timeframe (from August to July) in order to align to other Regulatory Authorities timeframes with regard to publication of charges.

With respect to the blended inflation rate, the TSOs are again aligning to the methodology approved by the RAs in applying a blended rate. In relation to the blended rate itself, the TSOs propose what it believes is an appropriate inflation rate based on its assessment of forecast inflation at the time of initial submission. In late 2014, the expectation was that there would be a reduction in the various published Harmonised Index of Consumer Prices (HICP) forecasts at that time and hence a rate of 0.5% was assumed appropriate. The Central Bank of Ireland forecast subsequently reduced from 1.2% to 0.2% while the UK Retail Price Index (RPI) forecast was c. 2.5%. The resulting blended rate was 1.0%. Given the range of published forecasts, and the frequency of their updates, the TSOs

accept the respondents views around transparency and as such propose the following methodology be applied going forward.

- 75% * Central Bank HICP forecast from the latest available quarterly report adjusted for the relevant tariff timeframe; plus
- 25% * Office of Budgetary Responsibility RPI forecast from the latest available quarterly report adjusted for the relevant tariff timeframe

Source		2015	2016	**2015/16**
OBR March 2015	RPI	1	2.1	**1.8**
Central Bank April 15	HICP	0.7	1.7	**1.5**
				1.5%

This calculation (based on April 2015 and March 2015 Reports respectively) results in an increased blended inflation rate of 1.5%.

It should be noted that the 1.5% forecast inflation for 2014/15 rates actually out-turned at less than 1% and as such the RAs may want to give consideration to making that adjustment as part of its determination.

2.8.3 TSOs' Recommendations

The blended inflation rate of 1% as proposed to be implemented.

3. NEXT STEPS

Following a review of comments on the HAS consultation paper the TSOs are now making these recommendations to the RAs. If approved by the RAs the TSOs will publish revised AS Statements of Payment and Charges for the 2015-2016 tariff period.

Amanda Kelly
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23rd March 2015

Dear Amanda

RE: Response to 2015/16 Harmonised Ancillary Services and Other Systems Charges Consultation

Given the other on-going changes that are occurring in the electricity market at this time and its draw on resources, Bord Gáis Energy (BGE) appreciates the earlier than usual consultation on this issue. BGE is however disappointed that proposals in relation to the RoCoF Incentive have not been included as part of this consultation.

The first tranche of priority generators are expected to conclude their RoCoF studies within the timeframe of the proposed 2015/16 rates. The exclusion of proposed RoCoF related rates in the consultation fails to recognise the costs that generators are incurring, particularly those in the priority listing, as a result of the compliance testing programme and the risks facing these generators as a result of the expected increase in RoCoF events. As suggested in the consultation paper, the introduction of a RoCoF ancillary service is to act both as an incentive to complete the RoCoF studies and to compensate for increased operation and maintenance cost associated with higher and more frequent RoCoF events. To this end, BGE urges the TSOs to work with generators to understand better the type and magnitude of costs expected as a result of the change in RoCoF standard and to develop a rate to reward compliance with a higher RoCoF standard as part of the decision paper for the 2015/16 HAS rates.

This would provide confidence to generators and investors that a mechanism exists which adequately compensates for the real risks and costs of operating in the Irish system. Recognising that the studies will not be complete, if the rates are to be truly an incentive for compliance, they should be available and applicable throughout the study period for those generators actively engaging. At this juncture, a rate related to the current expected costs of compliance may be appropriate. To the extent that further costs are identified as part of the study process, these can be discussed and consulted on as part of next years' annual review process.

Lastly, with respect to the inflation rates proposed in the consultation paper, more detail on the sources of both the UK and Irish inflation rates as well as the methodology blending the two rates would be helpful. Based on available data, from the relevant authorities in GB and Ireland it is difficult to reconcile the 1% rate proposed. Also, in footnote 11 of your consultation paper you refer to the 'general' forecasts for inflation in Ireland, could you please confirm the sources of your forecasts. Looking at forecasts from the Department of Finance it is again difficult to reconcile the 0.5% rate you propose in the consultation.

Yours sincerely,

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Brian Larkin
Regulatory Affairs – Commercial
Bord Gáis Energy

{By email}

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Response to:

"Harmonised Ancillary Services and Other System Charges Consultation - Tariff Year 1st October 2015 to 30th September 2016"

Introduction

ESB Generation and Wholesale Markets (GWM) welcome the opportunity to provide feedback on the TSO's proposed Harmonised Ancillary Services and Other System Charges for the 2015-16 tariff year. Part One of our response below details our comments on the Harmonised Ancillary Services arrangements and Part Two refers to the Other System Charges.

Part One – Harmonised Ancillary Services

ESB GWM's feedback on the TSO's proposals are summarised below.

Section 1.2 AS Policy

ESB GWM welcome the introduction of an AS Procurement Policy as this should provide more clarity to the TSO's contracting for system services. However, while the consultation document gives a very brief description, ESB would have expected a full policy document to have been produced by the TSO giving much more detail than has been provided. For example, ESB would be keen to know the relevant weighting of each of the factors outlined in the document as this would

- allow the service provider to better understand the TSO's requirements for procuring services
- facilitate proper budget planning and
- allow programs to be developed and executed commensurate with the services being sought..

Section 2.1.2 Ramping during and after an Under Frequency event

ESB GWM are of the opinion that the TSO's proposal relating to ramping before the frequency event can be done but is difficult to implement in practice. It will most likely require the generator to change the set point of the machine i.e. re-dispatch itself. This has a number of implications such as Uninstructed Imbalances and changes to current dispatch procedures. Both of these would require changes to the T&S code so all of these require consideration before changing the rules relating to ramping before a frequency event. As stated in our response to the 2014 HAS consultation, a more centralised approach where NCC would re dispatch plant would avoid the potential for such Uninstructed Imbalances.

Section 2.1.3 Ramping before an Under Frequency event - Pre-Event Assessment

ESB GWM see the proposal by the TSO relating to ramping before an under frequency event as an improvement on the current rules and would support its introduction albeit with a review period in the future to assess its suitability

Section 2.3 Dynamic Frequency Response from an Interconnector

ESB GWM would have concerns in this regard relating to Eirgrid's role as TSO and service provider. ESB GWM see a clear conflict of interest in this regard. It would appear that the rules are being written to suit one particular service provider - EWIC. Are the TSO going to assess the potential capabilities of all other service providers and introduce particular products to suit their capabilities also? This issue was raised in numerous responses to last years HAS consultation but there has been no response as yet from either the TSO or the Regulatory Authorities.

ESB GWM would welcome further clarification on these matters.

Section 2.4 RoCoF Incentive

ESB GWM fully support the cost recovery of RoCoF costs. However, it is difficult to see how the TSO can adequately incentivise compliance with the new standard when generators still do not know what they may have to pay to comply with it.

Also, it may be the case where the cost of compliance for a certain unit is a multiple of the cost of another unit. In this instance a mechanism of cost recovery for each generator would be more suitable and more economical overall compared to an incentive scheme which has to cover the most expensive costs but pays this to all.

Power NI Energy Limited
Power Procurement Business (PPB)

HAS and OSC Consultations

February 2015

Response by Power NI Energy (PPB)

23 March 2015

power ni
Power Procurement Business

Introduction

Power NI Power Procurement Business (PPB) welcomes the opportunity to respond to the consultation papers on Harmonised Ancillary Services (HAS) and Other System Charges (OSC).

PPB is the counter-party to Power Purchase Agreements, which were established in 1992 as part of the restricting and privatisation of the electricity supply industry in Northern Ireland. PPB purchases both the capacity of the contracted generating units and any electricity generated by those units on terms specified in the agreements. The generating units are extremely flexible and reliable and therefore with the changes in the generation mix and typology of the system these units are likely to play a significant role in helping the System Operator manage the system. Flexibility is required to securely operate a system, which is being re-designed to accommodate ambitious renewable targets.

DS3 System Services

PPB welcomes the work which has been undertaken by the TSO in relation to DS3. It is also important that the delay in the delivery of DS3, due to the important I-SEM considerations being made, does not stifle innovation in ancillary services as this will have detrimental impact on customers and the development of renewable projects. The TSO must therefore continue to explore opportunities to procure new ancillary services, where they provide material value for customers by minimizing constraint costs, in the period up to the implementation of the new DS3 arrangements. PPB notes that none of the four short term ancillary services, which were initially consulted upon in the Consultation Paper for 2011-12, have been procured. There must be a more expedient method for procuring ancillary services which can deliver operational flexibility and mitigate against high constraint costs. The delay in contracting for the new ancillary services has meant that both customers and ancillary service providers have been unable to realize the value associated with these services. Given the level of counter-trading on the interconnector there must be a strong economic case for both Flexible Mode Operation and Lower Minimum Generation services.

PPB is also concerned that the new regulated tariff proposed for 2016-2017 will be based on the current HAS budget of €60m. This value was derived from the original System Services scheme running in NI and has never been reassessed and does not properly remunerate the existing System Service Provider. The rates should also be benchmarked against similar products in GB.

AS Reporting

The current report is inadequate as it does not give sufficient transparency to providers. This is of particular concern in the lead in to the DS3 implementation date when there will be a requirement for bidding in of these ancillary services.

The TSO does not publish the adequacy, utilisation, or the efficient use of these services. Nor does the TSO publish the levels of Reserve or Voltage levels (MVAr) despatched against their License conditions or when there is a breach thereof.

Existing Ancillary Services

As RoCoF increases and the occurrences of Frequency Transients increase due to the increase in wind and lower inertia, generators will be exposed to greater risks to their plant. Penalties are increasing and yet the TSO has not been provided with any incentive to keep the number and magnitude of these events to a minimum. PPB believe the TSOs should be transparent in the level of each category of reserve being carried and this should be reported on a half hour basis to give industry confidence that the TSOs' License obligations are being met and generators are not receiving penalties due to the TSOs' mismanagement of the system through, for example, consciously under-carrying reserve.

Ramping before an Under Frequency Event – Pre-Event Assessment

The addition of the 3-5s average for pre-event criteria if a unit is ramping is a welcome change. However we believe there should also be flexibility to cover any other occasion where stability in output or frequency does not give a fair representation of the pre-transient conditions and that the pre-event assessment point should also be able to be adjusted if, in some unusual circumstance, the 3-5s or 30-60s timeframes do not provide an accurate point for analysis.

Influence of RoCoF on POR Performance assessment for Synchronous Generation Units

PPB welcomes this new piece of analysis and agrees that a unit which has provided inertia and been a benefit to the system should not be penalised for doing so. However, we believe that this inertia performance should actually be rewarded and that the HAS arrangements for 2015/16 should be enhanced to derive a payment for such provision. This development would be a rational interim step towards DS3.

Dynamic Frequency Response from an Interconnector

The Interconnectors provide the TSOs with sources of flexibility which help it to manage the technical challenges associated with a relatively small system. The interconnectors were both commissioned with the technical capability of providing very fast ramp rates which can be triggered by a binary input signal (which could be driven by frequency thresholds). The proposal to modify the Interconnector controls so that in a System event a low frequency relay triggers them to behave in a similar way to a generating unit with a 4% droop response may mean that other generating units fail to respond in the contracted manner and are penalized. This dynamic requires very careful analysis and consultation prior to introduction and payment for such a service. The TSOs, in this consultation paper, are recommending the introduction of a Dynamic Frequency Reserve product for interconnectors based on the hypothesis that this new product will "provide an improvement in frequency control during transients" which will "provide enhanced benefits to both the TSOs and the customer". If this is the criteria, which has been used to assess the merits of utilizing the technical capability and rewarding the same with a new ancillary service, ancillary service products such as Synchronous Inertial Response and Fast Frequency Response should also be assessed using this criteria.

Proposed Rates and Charges (HAS and OSC)

PPB welcomes the increase in rates in line with inflation. However, many of the payment rates were derived from the original System Support Services arrangements that operated in NI and has never been reassessed and, we believe, do not properly remunerate the services provided by existing System Service Providers. The rates should also be benchmarked against similar products in GB.

In terms of setting the rates for existing Ancillary Services, PPB has a concern in relation to the application of volatile exchange rates for Ancillary Service Providers in Northern Ireland which, with the recent strengthening of Sterling relative to the Euro, will mean NI service providers will be receiving less payment for ancillary services in 2015/16 than in 2014/15. Given that the original rates were derived from NI SSSA rates (which were in Sterling), PPB proposes that the NI rates for 2015/16 should be the 2014/15 rates in Sterling uplifted by inflation.

Existing OSC Developments

Again the TSO's are suggesting paying for additional services (i.e. Dynamic Frequency Response) on the Interconnector however there is a lack of fairness in the management of HAS and OSC arrangements. The Interconnectors must also be liable for all other System Charges too.

Late Synchronisation Charge

We believe the solution is the retention of the existing Grid Code with a review of the Other System Charges. A review of Other System Charges would deal with the TSO's only remaining concern that the level of charges are not sufficient to incentivise performance.

New OSC Charges

Secondary Fuel GPI

This unfairness continues as there is now the proposal to introduce a charge for non-availability on secondary fuel however there is not a corresponding payment for the provision of this service. If there is no payment for the provision there should be no subsequent penalty. The formula for the charge also penalises a unit which has a higher availability on its primary fuel rather than its secondary fuel. The charge needs to be against the availably of the secondary fuel.

RoCoF GPI

An interconnector has the capability of causing one of the largest RoCoF events on the system due a single point of failure. The tripping of an interconnector could also create significant harmonic disturbances on the system. Whilst the RA's are proposing a

Generator Performance Incentive for conventional generating units it is not proposing that all Grid Code Users are financially incentivised to minimise the number or magnitude of RoCoF events. This is despite the fact that the East West interconnector is the greatest risk. Further, whilst system separation is a major risk for the Northern Ireland system, there is no financial incentive being considered for either NIE or SONI to ensure that such an event does not happen.

PPB would welcome the publication of the methodology which has been used to value the proposed Generator Performance Incentive (GPI). PPB would also welcome an analysis to be completed, using the same methodology, to value a performance incentive for interconnector and tie-line owners in relation to:

- the mal-operation of an interconnector (up to 1000MW) which may cause a RoCoF event; and
- a system separation which may cause a RoCoF event.

This proposed GPI for non-compliance with the new RoCoF standard would be better designed to incentivise a reduction in the number and magnitude of RoCoF events. Consequently generators should receive remuneration reflecting their contribution to the minimization of RoCoF. The difference in the design criteria between the jurisdictions mean that a NI generator contributes more than twice the spinning reserve to the system, relative to generating unit capacity, than the ROI generators.

Other Comments

As discussed at the time of the introduction of the Harmonised Ancillary Services arrangements PPB still believes that the TUoS Agreement is not the correct agreement to contain Generator Performance Incentives. For example, disputes in relation to RoCoF GPIs could end up being referred to the Utility Regulator as a Licence breach. Interconnector owners have also argued that GPIs should not be applicable to them as they do not sign up to a TUoSA.

Harmonised Ancillary Services Consultation - Tariff Year 1st October 2015 to 30th September 2016

Moyle interconnector Ltd comments

The only comments we wish to make on this consultation are around the proposed use of a blended inflation rate to adjust the previously approved rates to make them applicable to the relevant tariff year i.e. Section 3.

The paper states:

"Current inflation forecasts in the UK, as published by bodies such as the Office of Budgetary Responsibility (OBR) indicate UK inflation of the order of 2-2.5%. Forecasts of HICP inflation in Ireland are general around 0.5%. On this basis, and recognising the relative balance between Ireland and Northern Ireland, and indeed the somewhat lower than originally forecast expected outturn inflation for 2014/15 the TSOs' view is that a blended rate of 1% for the forthcoming 2015/16 period is appropriate."

While the approach of referencing publications by bodies such as the OBR appears broadly correct, there is insufficient information here to allow market participants to validate the TSO approach. To assist transparency the exact reports should be referenced together with their dates, as inflation forecasts do vary over time. In addition, it would be helpful if any TSO calculations (or statement of a qualitative approach) around the blended rate was published.

Notwithstanding that the preferred approach is to have harmonised tariffs across jurisdictions, we do not feel that application of a blended inflation rate produces an equitable result. A blended rate means that parties in the jurisdiction with low inflation will be over compensated relative to parties in the jurisdiction with higher inflation.

Example

Moyle Interconnector Ltd is financed by index linked bonds. This means that the cost of these bonds is directly linked to UK inflation. This is by far Moyle's most significant cost so the business is tangibly affected by the UK inflation rate, more so even than Northern Ireland or Republic of Ireland inflation. If all of Moyle's income was linked to a blended inflation rate of 1% as proposed here, it would lose money over time as costs increase at a greater rate (2-2.5% per forecasts) than revenues. The opposite situation would occur if a party's costs were linked to a lower local inflation rate and its revenue to a higher blended rate – if this situation endured the latter party would experience unmerited continual rises in profit.

In addition to the above, it is a simple economic principle that inflation and exchange rates are linked. Where inflation is high (and forecast to remain so) this will have downward pressure on the local currency[1]. Therefore, adjusting the harmonised tariff using an actual exchange rate but a blended inflation rate means that parties experiencing higher inflation 'lose out' from both adjustments.

[1] High inflation in a jurisdiction means that its goods increase in price quicker than goods in jurisdictions with lower inflation. Therefore goods in the high inflation area become less competitive and demand for exports will fall. Therefore there will be less demand for the currency of the high inflation jurisdiction and its value will fall.

Alternative proposal

In order to retain the principle of harmonised tariffs we propose that the 'harmonised tariff' should be one that is unfettered by the effects of inflation or exchange rate adjustments. The harmonised tariff should therefore be 're-baselined' in Euro. It should then be adjusted for ROI inflation (for ROI/Euro market participants) and for both currency and UK inflation (for NI/GBP market participants). This would allow the continuation of harmonisation of tariffs while producing an equitable result for all, both now and in future years.

IWEA response to the HAS and OSC Consultation Paper for the Tariff Year 2015/2016.

IWEA welcomes the opportunity to respond to the consultation on HAS and OSC Consultation Paper for the Tariff Year 2015/2016.

Proposals on Tariffs and Charges

The consultation paper outlines the following proposals:

- In this year's Annual Tariff Consultation on the harmonised All-Island Ancillary Services the TSOs are proposing to adjust the rates for an assumed level of inflation. The TSOs' view is that a blended rate of 1% for the forthcoming 2015/16 period is appropriate. No other changes to rates are proposed.
- In this year's Annual Tariff Consultation the TSOs are proposing to retain the OSC rates approved for the 2014-2015 tariff year adjusting for inflation at forecast rate of 1% for the Tariff year 2015-2016. No other changes to rates are proposed.

IWEA supports these proposals at this time.

The Delivery of I-SEM

IWEA acknowledges that changes will be required to the Other System Charges through the I-SEM design and supports that this should be further considered in line with the decisions on the detailed implementation of the market design.

Introduction of new GPIs

IWEA believes that the current use of the controllability categorisation policy for grid code compliance is not appropriate as the penalty of being moved into category (i) for non-compliance, and the associated increased levels of curtailment, is too severe relative to the level of non-compliance. It should be noted that an appropriate incentive/penalty system is already in place to ensure generators prove compliance in a timely manner.

- All wind farms are incentivised commercially to prove controllability in order to lift the MEC capacity caps during turbine commissioning and then to achieve operational readiness certification. Without passing this point a generator cannot become a VPT in the market.
- The MEC bond process then provides an incentive through severe penalty to achieve full grid code compliance as quickly as possible. In bonding regime 2 wind farms are given one year to achieve compliance or risk having the bond drawn down in manner which escalates month by month. This timeline needs to be reviewed in light of length of time required to connect larger wind farms and to carry out testing.

- For older sites on bonding regime 1 the MEC bond is not returned until compliance is achieved. There is no benefit in taking any more time than is necessary to navigate this process.
- Generators cannot receive ancillary service revenue until an ops cert is issued which is another financial incentive in place. This incentive is greater the larger the wind generator.
- Market participants cannot access market payments for constraint/curtailment compensation without the Wind Farm having achieved its operational certificate.

The wind industry supports the need for compliance of the generation fleet. The introduction of GPIs for wind energy could be considered as an alternative to the use of the categorisation policy. An appropriate penalty system should be based on the impact of the non-compliance and not directly linked to curtailment as is the case now. If there is very low curtailment a compliance penalty is actually not applied.

IWEA requests that a detailed discussion and consultation on a potential system be facilitated. It would not be appropriate to introduce GPIs while the existing policy is in place. It is essential that a holistic view is taken in relation to the incentives/penalties being applied to generators to ensure that any penalty introduced is not too severe, and that it appropriately reflects the level of non-performance. Therefore no GPIs should be introduced without adequate consultation on the proposal.

RoCoF GPI

The RA's RoCoF modification to the Grid code decision paper states that the RAs intend to phase the introduction of GPI according to the unit categorisation and will confirm the decision on this matter on 10 November 2015.

IWEA notes that the introduction of the RoCoF modification is an essential part of the DS3 programme to ensure that the SNSP level can be increased. We welcome the introduction of GPIs to incentivise generators to be compliant with the RoCoF modification, however it must be ensured that this is introduced in a fair manner such that wind generators are not penalised ahead of other types of generation.

ENERNOC ACTIVATION ENERGY

23th March 2015

Amanda Kelly
EirGrid Plc,
The Oval,
160 Shelbourne Road,
Dublin 4

Re: Harmonised Ancillary Services Consultation for 2015-2016

Dear Amanda,

Thank you very much for the chance to comment on this matter. As you may know EnerNOC currently provides in excess of 110MW of capacity to the system through our DSU service. The capacity is made up of customers who can reduce their load on the system when requested to do so. We believe that the service has been a success to date as we have met any dispatches made by Eirgrid on full.

The DSU service requires customers to provide Demand Reduction within 1 hour of a dispatch from the TSO. While this provides certain services to the TSO, we believe that some customers could provide much faster demand reduction if requested.

We therefore ask that as part of this review that provision be made for the procurement of Ancillary Services from DSUs as well as traditional Generators. This would be a further step towards equal treatment between DSUs and Generators. We hope that this proposal will also be seen as a positive step to make now as we move towards offering further services under the DS3 project.

Regards

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