Response to the Regulatory Authorities Minded to Decision Paper on the Process for the Calculation of Outturn Availability

SEM-15-14

April 2015

1. Executive Summary

The Regulatory Authorities have published a Minded to Decision Paper (‘**the Paper’**) on the Process for the Calculation of Outturn Availability on the 23 February 2015.

Points set out below summarise the TSOs (EirGrid and SONI) considerations in relation to said Paper. Some initial assumptions, interpretations and suggestions are also presented.

The TSOs would welcome the opportunity to discuss with the RA’s further issues (both interpretation and implementation) or elaborations relating to outturn availability ahead of any final decision on this matter:

1. The transmission outage season is regarded as bring a calendar year
2. The implementation of the final process for the calculation of outturn availability applies from the 1st January 2016 for ease of implementation and to allow time for changes to be made to the Grid code and Trading and Settlement code as appropriate and assuming clarity exists in relation to how the decision would be implemented - for example, clarity should prevail amongst stakeholders in relation to how maintenance days are defined, scheduled, notified, and modified
3. Minimising outages is of key importance to the TSOs given that outages impact on system security, security of supply to customers, system minutes lost, DBC, operational complexity, operational risk, and impact to customers commercially
4. Scheduled annual maintenance includes preventative/routine, corrective and statutory maintenance.
5. In scheduling outages, the TSO propose to nominate (up to) five *designated* days. It should be noted that, on occasion, outage schedules will change at short notice, often in response to stakeholder requests
6. A fault or forced outage is not classed as a transmission maintenance outage.
7. If a scheduled transmission maintenance outage overruns beyond the scheduled end date, the extra days will not be regarded as being *designated* days.
8. During scheduled annual maintenance outages the TSOs propose that five calendar days rather than five business days apply where the generator will be considered to have an outturn availability of zero.
9. The Five Day accumulation, generally speaking, will begin on the first day of a transmission maintenance outage regardless of the other types of outages that may be taking place simultaneously by either the generator itself or on the generator’s connection assets. Appendix 1 outlines the TSOs current proposed interpretation of a generator’s outturn availability for different outage scenarios.
10. The five day accumulation will be reset on the 1st of January each year.
11. The five days do not have to be consecutive and can be accumulated over a number of separate transmission maintenance outages.
12. The outturn availability of generators with temporary connection assets will be zero only for outages that are driven by the generator’s own construction works.

13. The outturn availability of in-situ phases of wind farms will be zero when affected by works to connect any subsequent phases.
14. Points raised above are based on initial interpretations of the current 'Minded to' decision. Following a final decision, the TSOs suggest that they compile and publish an 'Implementation Paper'.

The remainder of this response document sets out in more detail the combined response of both TSOs and their assumptions of the process as outlined in the Paper. The layout of this response follows that of the Paper. It should be noted that the final decision on the process for the calculation of outturn availability will eventually be superseded by the new Integrated – Single Electricity Market (I-SEM) rules.

2. Introduction

The TSOs (both EirGrid and SONI) welcome the publication of the Regulatory Authorities Minded to Decision Paper on the Process for the Calculation of Outturn Availability (SEM–15–14) published on the 23 February 2015 and the opportunity to respond to same. This response is submitted on behalf of EirGrid and SONI, in their capacities as licenced TSOs in Ireland and Northern Ireland respectively. The TSOs note that the outages referred to in this response are transmission outages driven solely by the TSO. The TSOs observations and comments are outlined in the following sections.

3. Different Regulatory/Licence Frameworks in Ireland and Northern Ireland

The Paper as written suggests that the roles of the TSOs and TAOs (ESBN and NIE) in the two jurisdictions are aligned and does not always acknowledge the split responsibility, control and thus risk. SONI does not have responsibility for maintenance policy, maintenance requirements, or maintenance durations in Northern Ireland and acts as a scheduler of outages, of which a portion is driven by maintenance outages requested by NIE. In Ireland, EirGrid in collaboration with ESBN determines maintenance policy and requirements and ultimately schedules maintenance outages into the wider outage plan, based on information provided by ESBN, who in turn determines the durations required and availability of resources. The TSOs ask that the final decision paper from the RAs clearly apportion specific actions on the appropriate licenced party (EirGrid, SONI, ESBN or NIE) responsible in each jurisdiction.

4. RAs recommended arrangements for the calculation of Outturn Availability

Presently, the transmission outage season (including both capital and maintenance outages) runs from the start of March to the end of November (variable in recent years). Transmission maintenance outages are however facilitated all year round. Therefore, the TSOs propose to apply the arrangements for the calculation of outturn availability on a calendar year basis (1st January – 31st December).

The TSOs wish to clarify that a meshed transmission station is defined (for the purposes of this response) as a station with two or more circuits connecting that station (none of which are tailed) to other parts of the transmission system. It would therefore be the case that not only wind farms (as detailed in the paper) but for any generator type there can be a considerable distance between the transformer and the meshed transmission system and that maintenance anywhere along that path can affect the availability of that generator.

The TSOs propose to compile and publish an 'Implementation Paper' so as to ensure that stakeholders can have a common understanding in relation to how the TSOs will implement the final decision as directed by the RAs. This response paper endeavours to anticipate and propose some high level proposals in this regard.

It is the TSOs' understanding that scheduled annual maintenance includes preventative/routine, corrective and statutory maintenance. For avoidance of doubt, a fault or forced outage is not classed as a transmission maintenance outage.

In circumstances where a scheduled transmission maintenance outage overruns the scheduled end date, the extra days will not be treated as *designated* days.

The TSOs believe the five days ('the Five Days') referred to in section 6.2 of the Paper should be calendar days and not business days. It is irrelevant to a generator unable to export onto the transmission network due to a transmission outage whether that outage occurs on a business day or weekend day. The TSOs suggest the RAs consider five calendar days rather than five business days.

It is the TSOs reading of the Paper that the Five Day accumulation for an individual generator will restart on the 1st of January each year. For avoidance of doubt, the Five Days do not have to be consecutive.

In order to provide clarity to generators on which transmission outage days will count towards the accrual of the Five Days the TSOs propose the following:

- Upon publication of the final Transmission Outage Plan (currently the end of February of the year in question) the TSOs will indicate to each generator which days of the scheduled transmission outages in the coming year are *designated* towards the accrual of the Five Days. For example, a three day transmission maintenance outage of T2001 on the 15th – 17th May will count towards day 1, day 2 and day 3 of the Five Days where the generators outturn availability will be zero.
- If, during the year, the transmission outage is re-scheduled the *designated* days will remain with the transmission maintenance outage on the new dates. For example the above transmission maintenance outage of T2001 is now re-scheduled for the 1st – 3rd July. These *designated* days will still be counted as day 1, day 2 and day 3 of the Five Days where the generators outturn availability is zero. It should be noted

that, whilst endeavouring to have consideration of stakeholders' interests, circumstances will arise occasionally whereby schedules may change at short notice and that *designated* days may change accordingly.

- If any additional transmission outages are scheduled during the year the TSOs will *designate* any remaining days from the Five Day total. For example, a second three day scheduled transmission maintenance outage of T2001 from the 20th – 23rd August will be counted as day 4 and day 5 of the Five day total. On day 6 the outturn availability of the affected generator will be the technical availability of that generator.

Appendix 1 outlines the outturn availability for a number of transmission outage scenarios and the accrual of the *designated* Five Day total. The TSOs request the RAs affirmation (or otherwise) of the TSOs' interpretation regarding outturn availability in different outage scenarios.

To implement and track the accrual of the *designated* Five Day total in a calendar year, the TSOs assume five whole calendar days. For practical administration a transmission maintenance outage scheduled for part of a day can be counted as one whole *designated* day towards the five day total. However, it should be noted that this would be for administrative purposes only. A generator will be deemed outturn available as per their technical availability for the periods of the day when the transmission maintenance outage is not occurring.

Until a final decision on outturn availability has been implemented, it is assumed that using thecurrent custom and practise for determining outturn availability will continue to apply. It is the TSOs' understanding that the final decision on the process for the calculation of outturn availability will not be applied retrospectively. Furthermore, the TSOs suggest that the final process for the calculation of outturn availability be implemented from the 1st of January 2016 so as to;

- ensure all generators are subject to the same outturn availability calculation in the same calendar year – a change to the process midyear would be very difficult to implement.
- allow time for changes to be made to the Grid Code and Trading and Settlement Code as appropriate consequential to the final decision
- allow time for an 'Implementation Paper' to be published

5. Outage Planning

There are some references to the lack of obligations or incentives on the TSOs and/or TAOs in regard to efficiently carrying out maintenance in the Paper. To the extent that they can, the TSOs seek at all times, where they have the ability to do so, to optimise the outage schedules in Ireland and Northern Ireland respectively. It is essential to note however that

the TSOs have limited control over outage durations – these are determined by the TAOs. However, in both Ireland and Northern Ireland the TSOs must always seek to operate the system in a safe, secure, reliable, economical and efficient manner. The TSOs are required to set up to be independent of market participants and with no position in generation or supply.

Outage management is also covered by the Dispatch Balancing Cost (DBC) incentive which is in place in both Ireland and Northern Ireland. One of the ways to minimise the impact of outages on DBC is by looking at shortening outages. However, as already noted there is a limit to the extent that the TSOs can influence this.

The TSOs note that the consultation on the calculation of outturn availability and the comments received from industry pertain to the outage planning process as it was in 2012/2013. There have been a number of significant improvements to the outage process and outage communications with customers since that time and some of these are outlined in the following paragraphs;

For practical outage planning reasons, in both Ireland and Northern Ireland, transmission generators are always given first option to input to the scheduling of transmission outages of their connection assets and given further opportunities to re-schedule throughout the process. Harmonised All-Island Generation Outage Planning is carried out by the TSOs to ensure that they can co-ordinate, optimise and approve outages of generators (and other electrical energy providers, where applicable). For more information on how this is achieved, please refer to the Harmonised All Island Generation Outage Planning document. Further detail on the process in Ireland is available on the EirGrid website Generation Outages. The Generator Outage Plan reflects the outages of non-wind generators as required and specified by the generator themselves.

Separate from the above process and on a separate basis in both jurisdictions the Transmission Outage Planning process is undertaken. The primary aim of the transmission outage scheduling process is to ensure that all outages required to complete maintenance and capital works are scheduled insofar as is possible, that system security is maintained within Operational Security Standards at all times and endeavouring to keep constraint costs to a minimum. In Ireland there is already extensive information published on the EirGrid website in regard to Transmission Outage Planning.

In preparing the Transmission Outage Plans in Ireland and Northern Ireland respectively, save for critical works required (e.g. to address safety concerns), generator outage requirements are generally given primacy and the TSOs seek to schedule all other works impacting on a generators connection or ability to export in and around the known generators declared outage times. There is extensive engagement with the generators as part of this process. Generators are advised of all outages (not just maintenance) that will or

may impact on their connection to the grid. This includes outage schedules, overall durations and also details of the individual works being undertaken and the respective durations of each.

The majority of changes to the committed outage program (non-wind generator outages) are accepted – only on very rare occasions will an outage be rejected (primarily driven for system security reasons). In regard to the Transmission Outage Plan as noted above, it is designed to fit around the generator outage schedule and the TSOs seek to align outages to the generators outages and changes in same, where possible, recognising that there can be a knock on impact on grid delivery and/or dispatch balancing costs. Wind farms typically schedule their own outages for low wind summer months. Where possible, transmission works impacting wind farms are scheduled during these months.

The TSOs facilitate meetings with generators individually throughout the outage season to discuss the outage planning process and the scheduled transmission outages which will affect the generator's connection assets. The TSOs are always open to meeting any generator if requested. The TSOs suggest that a bilateral engagement (where proposed outages are discussed in detail) should not be substituted by a forum on outages. A forum discussing the particulars of specific generator outages may not result in a meaningful engagement given the possible commercial sensitivities involved for the stakeholders.

With reference to the following statement in the Paper, *"A document, detailing the various types of annual maintenance and estimated timescales for each type of maintenance should also be produced by the relevant party in each jurisdiction, and published on their respective webpage's."*;

- In Ireland the timescales for carrying out work are determined by the TAO. Of note, there is already a document published on the EirGrid website detailing the various types of annual maintenance[1]. This document can be updated to include the estimated timescales for each type of maintenance where provided by the TAO. It may be appropriate subsequently to review the document, again in collaboration with ESBN, on an annual basis to incorporate any changes to the standard outage durations for maintenance activities.
- In Northern Ireland, all maintenance is the responsibility of the TAO (NIE). SONI can facilitate the publishing of a link to such a document on its website.

The TSOs have proposals regarding the proposed Ex Post Summary report. As highlighted already in this response there is a difference in Ireland and Northern Ireland regarding the TSOs responsibilities for transmission maintenance. Therefore, in order to publish a single report the TSOs propose the report compares planned scheduled outage durations against

[1] The detail of each type of maintenance is published in a document 'Guide to EirGrid Transmission Equipment Maintenance' on the EirGrid website
http://www.eirgrid.com/media/GuidetoEirGridTranmissionEquipmentMaintenanceSept2013.pdf

the actual outage durations and not include details of the work carried out. As the 2015 calendar year has already begun, for practical purposes the TSOs propose that the first Ex Post Summary report be published based on information in the 2016 calendar year.

6. Temporary Connection Assets

The RAs propose the outturn availability of generators with temporary connection assets to be zero for all outages on the basis that the driver is the generator's own construction works. The TSOs will assume that any other transmission outages affecting the generators on temporary connections which are not driven by the generator's own construction works will be subject as normal to the final process for the calculation of outturn availability as detailed in Section 5.

7. Extensions to or changes at existing connections

The TSOs welcome the clarity the RAs have provided on this point. The TSOs take this to mean where work is being carried out that is entirely related to an existing generator (A) the outturn availability will be equal to zero. If another generator (B) with a different connection point to generator A but with shared connection assets is affected by that work then the outturn availability of generator B will equal that of its technical availability regardless of the relationship between generators A and B.

The TSOs request the RAs to consider the following situation and clarify what the outturn availability of the existing generator would be; under existing CER approved connection policy in Ireland, a wind farm can phase its installation over a period of up to three years. Each phase can be connected to the existing connection point. Once the initial phase is up and running work to connect the subsequent phases may drive prolonged outages of the connection point. It is the TSOs current position (which is normally reflected in the Connection Agreement) that the outturn availability of the in-situ phases is zero.

8. Appendix 1

The table below shows a number of different outage scenarios, the resulting outturn availability determination and how the TSOs accumulate the Five Days.

Legend	
Generator's own Outage	
Transmission Maintenance Outage	
Transmission Capital Outage	
Generator declare their own technical availability	A
Generator Outturn Avaialability is zero	0

		Number of Days										
		1	2	3	4	5	6	7	8	9	10	11
Scenario A	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0			0	0	A			
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5			4/5	5/5				
Scenario B	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0	A	A	A	A	A	A
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5	5/5						
Scenario C	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0	0	A	A	A	A	
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5	5/5						
Scenario D	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0	A	A	A	A	A	
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5	5/5						
Scenario E	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0							
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5							
Scenario F	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0	A					
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5	5/5						
Scenario G	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0	A	A				
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5	5/5						
Scenario H	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0	0	0	0	0	0	
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5	5/5						
Scenario I	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0	A	A	A			
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5	4/5	5/5						
Scenario J	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	A	A	A	A				
	Accumulation of the 5 Calendar Days	1/5	2/5	3/5								
Scenario K	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	A	A					
	Accumulation of the 5 Calendar Days											
Scenario L	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	A	A	A	A	A	A					
	Accumulation of the 5 Calendar Days											
Scenario M	Generator's own Outage											
	Transmission Maintenance Outage											
	Transmission Capital Outage											
	Resulting Outturn Availability of Generator	0	0	0	0	0						
	Accumulation of the 5 Calendar Days											

Figure 1; Outage Scenarios