



Single Electricity Market

Draft Transmission Loss Adjustment Factors

Consultation Paper

27 October 2009

SEM-09-102

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I INTRODUCTION

In June 2005 the Commission for Energy Regulation (“CER”) and the Northern Ireland Authority for Utility Regulation (“NIAUR”), collectively known as the Regulatory Authorities, published a decision paper entitled “SEM High-Level Design Decision Paper¹. This paper outlined the design of the Single Electricity Market (the “SEM”) for the island of Ireland, and included a decision requiring that transmission losses in the SEM be accounted for on an all-island basis, using a consistent methodology involving the application of locational Transmission Loss Adjustment Factors (TLAFs) to the outputs of generators.

Following the publication of this paper, the Regulatory Authorities had extensive discussions on the issue with EirGrid and the System Operator for Northern Ireland (SONI), the transmission system operators in Ireland (“RoI”) and Northern Ireland respectively. This led to a Regulatory Authority consultation and then a decision paper in August 2006² on the treatment of and methodology for all-island harmonised transmission losses. The treatment/methodology decided upon is outlined in section II.1 below.

Following this the System Operators submitted all-island TLAFs to the Regulatory Authorities, applying the decided policy for their treatment, for subsequent consultation and decision by the Regulatory Authorities. All-island TLAFs have accordingly been operational since the Go Live of the SEM, 1 November 2007, and the current approved TLAFs apply to 31 December 2009³.

In accordance with the SEM Trading & Settlement Code, EirGrid and SONI have recently submitted to the Regulatory Authorities a set of draft TLAFs for each generator within its jurisdiction, to apply from 1 January 2010. It is anticipated that these TLAFs will apply until end September 2010 at the latest (see below). These were calculated jointly by the System Operators in accordance with the approved methodology referred to above. They are now included in this paper for public consultation.

For information, it should be noted that the Regulatory Authorities and System Operators are currently reviewing the locational signals in SEM through their

¹ “The Single Electricity Market (SEM) High Level Design Decision Paper”, 10 June 2005, AIP-SEM-42-05.

² “The Single Electricity Market: Treatment of Transmission Losses. Decision Paper”, 31 August 2006, AIP-SEM-112-06.

³ “Transmission Loss Adjustment Factors for 2009”, SEM-08-173, 26 November 2008

“Locational Signals Project”, which includes a review of the TLAF and Generator Transmission Use of System (GTUoS) methodologies. The next public consultation under this workstream, which is scheduled to be published in November 2009, will propose the System Operators’ preferred methodologies for future all-island TLAFs (and GTUoS). A final Regulatory Authority decision is expected by February 2010. Pursuant to the current plans of this workstream, any new TLAF methodology decided upon is expected to Go Live from 1 October 2010.

Furthermore, the Regulatory Authorities are aware that the Trading and Settlement Modifications Committee meeting of 29 September 2009 recommended for approval a Modification (Mod_24_09) which changes the period on which the TLAFs are calculated, from a calendar year to a tariff year basis. The Modification Committee’s Final Recommendation Report will be sent to the Regulatory Authorities for decision in due course.

Therefore, on account of these developments a new TLAF methodology is expected to Go Live from 1 October 2010. In addition, as referred to in section II.3, if considered appropriate by the Regulatory Authorities it *may* be possible to introduce a new TLAF methodology earlier than October 2010.

II.1 Methodology

Draft TLAFs from 1 January 2010 have been received from EirGrid and from SONI, together with statements that these have been calculated in accordance with the current all-island methodology (AIP-SEM-112-06) approved by the Regulatory Authorities. The draft 2010 TLAFs are shown in Appendices A & B to this paper.

This approved methodology is based on the methodology previously used by EirGrid for the RoI system prior to the introduction of the SEM, albeit calculated on an all-island basis and calculated monthly rather than seasonally. TLAF values are derived by modelling the increase or decrease in transmission system losses that arise as a consequence of an increase or decrease in the output of each generator against a background of generation and demand that is representative of the month and day/night condition to which TLAFs are to be applied. The TLAFs for each particular month and day/night condition are then shifted uniformly, in order to recover in aggregate the overall transmission losses that are estimated to occur for that condition, whilst retaining differentials between TLAFs that reflect the differential losses incurred for an increment or decrement of generation at each location.

Appendix D provides detailed information on the generation and demand scenarios used in the derivation of the TLAFs, in order to provide

transparency to market participants. At a high level, the System Operators have stated that since the derivation of the 2009 TLAFFs the scenarios used have been amended, as is standard practice annually, in light of expected system conditions, with notable changes being:

- i. New conventional generators on the island as follows:
 - New ESB PG plant connecting near Cork city is assumed to be commercially available for all of 2010.
 - New Bord Gáis plant also connecting near Cork city is assumed to become commercially available from July 2010. For the period March – June it is assumed to be testing and dispatched at approx 100MW.
- ii. Total renewable generation on the island comes to approx 2000 MW by end of 2010;
- iii. A flat wind flat profile of 31% (ROI) & 33% (NI) is assumed, however in some periods these levels are not maintained as Plexos (which is used to derive the dispatch) curtails the wind; and,
- iv. Substantial reduction in 2010 forecast demand compared to 2009 forecast demand.

In accordance with the decision of the Regulatory Authorities, random forced outages of generators are not modelled. During the development of the approach to deriving all-island TLAFFs it was concluded that to do so introduced a random element into the resulting TLAFFs that was not desirable. However, the System Operators have pointed out that the maximum possible output of each generator in each scenario is determined by the Maximum Export Capacity scaled to reflect average availability. Without such an adjustment, the output of marginal plant in each scenario would be unrealistically low, and would result in TLAFFs which would not be representative of actual system conditions.

II.2 Results

Appendices A & B to the paper show the draft TLAFFs proposed from 1 January 2010 for the two jurisdictions. Please see section II.3 regarding their applicability period. Appendix C provides analysis of the changes from 2009 to 2010 including year-on-year percentage change in TLAFFs. In accordance with the Regulatory Authorities' decision last year to pursue greater transparency, the generation and demand scenarios are shown in Appendix D.

The following is a summary of the information in the Appendices:

- Appendix A - Draft NI 2010 TLAFFs;

- Appendix B - Draft RoI 2010 TLAFs;
- Appendix C - Analysis of 2010 TLAFs; and,
- Appendix D - Generation and Demand Scenarios.

Please note that the spreadsheets published separately with this paper provide Appendices A, B and D, for ease of reading.

Information on the transmission network is given in the respective Transmission Forecast Statements of the two System Operators^{4,5}.

Notable features of the 2010 TLAFs are:

- (1) TLAFs remain more tightly grouped in Northern Ireland, compared to Ireland, reflecting the more tightly coupled nature of the system in Northern Ireland;
- (2) Values in RoI are widely spread, with both the highest and lowest values occurring in that jurisdiction.
- (3) Compared to 2009, higher TLAFs in Ireland tend to decrease and lower TLAFs in Northern Ireland tend to increase. This is due principally to the connection of new conventional generation in the Cork region, from which there is a dominant flow, with consequential reductions in other generation and in Moyle imports; and,
- (4) TLAFs for generation in the Donegal area have decreased as new generation is added north of Cathleen's Falls.

II.3 Relation to the Locational Signals Project

For reasons explained in section II.2 above, it can be seen that the all-island TLAFs proposed from 1 January show considerable changes for market participants from those TLAFs currently in operation. This volatility reflects the losses that generators are expected to drive on the transmission system next year and the RAs are satisfied, subject to this consultation, that the proposed TLAFs, in accordance with the methodology already approved, are cost reflective among generators. However the RAs do recognise that this volatility in market participants' TLAFs is a growing feature of the TLAF methodology as more generators connect and that this volatility may well grow into the future as, for example, more dispersed and variable wind generation connects. This will arguably make it more difficult for generators to accurately

⁴ "Transmission Forecast Statement 2008-2014", EirGrid, October 2008.

⁵ "Transmission Seven Year Capacity Statement 2009-2015", SONI.

forecast their future TLAFs and their financial impact with a high degree of certainty.

This increased volatility is one of the key reasons that the RAs have asked EirGrid and SONI to review the existing all-island generator TLAF methodology as part of their “Locational Signals Project” (which was initially limited to developing an all-island approach to GTUoS tariffs). Accordingly EirGrid and SONI recently published for consultation⁶ options for developing a new all-island TUoS and TLAFs regime to provide for various objectives including ways to mitigate TLAF volatility. A further consultation paper proposing a particular option(s) is expected to be published in the near future. This is with a view to a final decision on the matter being made by the RAs in Q1 of 2010 and Go Live of the new TUoS and TLAF methodologies from October 2010. Furthermore, if considered appropriate, taking account of various policy objectives, it *may* be possible to introduce a new TLAF methodology earlier than October 2010. In this regard the Regulatory Authorities will examine with the System Operators the feasibility of implementation in advance of October 2010. This would of course not prejudice the final RA decision on a new TLAF methodology, to be made in Q1 in the context of the “Locational Signals Project” as mentioned above.

⁶ Methodology Options for Locational Signals - Associated with SEM-09-049

III VIEWS INVITED

The Regulatory Authorities invite views on the System Operators' draft TLAFs including:

1. The dispatch scenarios used to derive the values;
2. The subsequent draft TLAf values proposed; and,
3. The appropriateness of the early introduction in 2010 of the new methodology as discussed in section II.3.

Comments should be submitted by 17:00 on Tuesday 24th November 2009 to jlynch@cer.ie and sarah.friedel@niaur.gov.uk.

Following a review of comments received to this consultation the SEM Committee plans to publish approved TLAFs for 2010 early in December.

Appendix A.1 – Draft NI 2010 TLAFs by Node

APPENDIX A.1
DRAFT NORTHERN IRELAND TRANSMISSION LOSS ADJUSTMENT FACTORS 2010

Transmission Station	Bus Voltage kV	Month																							
		January		February		March		April		May		June		July		August		September		October		November		December	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Aghyouse	110	0.991	0.999	0.993	0.992	0.996	0.995	0.987	0.985	1.004	1.004	0.989	0.998	1.002	1.001	1.012	1.007	0.994	0.974	0.989	0.985	0.997	0.993	1.008	0.996
Antrim	110	0.989	1.012	0.990	1.006	0.995	1.011	0.998	1.006	1.002	1.014	0.998	1.011	1.012	1.016	1.022	1.017	1.023	1.011	1.013	1.021	1.013	1.025	1.019	1.028
Ballylumford	110	0.976	1.005	0.975	0.999	0.981	1.003	0.982	0.995	0.984	1.002	0.983	1.000	0.996	1.006	1.010	1.008	1.013	1.005	0.997	1.012	0.997	1.017	1.000	1.019
Ballylumford	275	0.982	1.007	0.983	1.002	0.989	1.006	0.991	1.001	0.994	1.009	0.991	1.006	1.005	1.011	1.017	1.013	1.019	1.008	1.006	1.017	1.005	1.020	1.011	1.022
Ballymena	110	0.994	1.016	0.995	1.010	1.001	1.015	1.003	1.009	1.006	1.017	1.002	1.014	1.016	1.019	1.027	1.020	1.028	1.014	1.018	1.025	1.018	1.028	1.025	1.032
Banbridge	110	1.006	1.020	1.006	1.015	1.009	1.017	1.009	1.014	1.014	1.020	1.011	1.018	1.024	1.023	1.031	1.023	1.030	1.019	1.026	1.028	1.027	1.032	1.032	1.035
Ballyvallagh	110	0.983	1.009	0.983	1.003	0.988	1.007	0.990	1.000	0.992	1.008	0.990	1.005	1.003	1.010	1.016	1.012	1.018	1.008	1.005	1.016	1.005	1.021	1.010	1.024
Ballynahinch	110	1.010	1.026	1.011	1.021	1.014	1.023	1.014	1.017	1.016	1.024	1.013	1.021	1.026	1.025	1.037	1.027	1.039	1.022	1.031	1.033	1.034	1.041	1.043	1.043
Carmonny	110	0.994	1.017	0.995	1.011	0.999	1.014	0.999	1.007	1.002	1.014	1.000	1.012	1.013	1.017	1.025	1.019	1.027	1.015	1.016	1.023	1.017	1.029	1.022	1.032
Castlereagh	110	1.001	1.019	1.002	1.014	1.006	1.017	1.007	1.012	1.010	1.019	1.007	1.017	1.020	1.021	1.031	1.022	1.032	1.017	1.023	1.027	1.025	1.032	1.036	1.036
Castlereagh	275	0.995	1.015	0.996	1.010	1.000	1.013	1.001	1.008	1.005	1.015	1.002	1.013	1.015	1.018	1.025	1.019	1.026	1.014	1.017	1.023	1.018	1.028	1.024	1.031
Belast Central	110	1.002	1.020	1.003	1.015	1.007	1.018	1.008	1.013	1.011	1.020	1.008	1.017	1.021	1.022	1.032	1.023	1.033	1.018	1.024	1.028	1.026	1.033	1.033	1.036
Belfast North Main	110																								
Coleraine	110	0.993	1.014	0.996	1.007	0.998	1.009	0.994	1.001	1.012	1.021	0.994	1.010	1.010	1.018	1.019	1.016	1.019	1.005	1.012	1.020	1.017	1.026	1.028	1.029
Coolkeeragh	110	0.971	1.002	0.974	0.994	0.976	0.996	0.976	0.990	1.001	1.015	0.976	1.000	0.996	1.011	1.001	1.005	0.999	0.993	0.991	1.010	0.993	1.012	1.003	1.014
Coolkeeragh	275	0.974	1.003	0.976	0.996	0.979	0.998	0.979	0.993	1.000	1.015	0.979	1.002	0.998	1.012	1.004	1.007	1.003	0.996	0.994	1.012	0.996	1.014	1.005	1.016
Creagh	110	0.993	1.014	0.994	1.008	0.999	1.013	1.000	1.007	1.006	1.016	1.001	1.013	1.015	1.018	1.025	1.019	1.024	1.011	1.015	1.022	1.015	1.026	1.022	1.029
Cregagh	110	1.002	1.020	1.003	1.015	1.007	1.018	1.007	1.013	1.010	1.019	1.008	1.017	1.021	1.031	1.023	1.032	1.018	1.024	1.028	1.026	1.033	1.032	1.036	
Donegal	110	0.998	1.018	0.999	1.012	1.004	1.016	1.004	1.011	1.007	1.017	1.005	1.015	1.018	1.020	1.029	1.021	1.031	1.017	1.021	1.026	1.022	1.031	1.034	1.034
Drumnakelly	110	1.002	1.018	1.003	1.013	1.005	1.015	1.006	1.011	1.011	1.018	1.008	1.016	1.021	1.021	1.028	1.021	1.027	1.016	1.022	1.025	1.023	1.029	1.032	1.032
Dungannon	110	0.995	1.014	0.996	1.008	1.001	1.011	1.000	1.006	1.009	1.017	1.001	1.012	1.015	1.018	1.024	1.018	1.020	1.008	1.013	1.018	1.015	1.023	1.022	1.026
Eden	110	0.987	1.012	0.987	1.006	0.993	1.010	0.993	1.002	0.994	1.009	0.993	1.007	1.006	1.012	1.019	1.015	1.022	1.011	1.008	1.019	1.010	1.025	1.014	1.027
Enniskillen	110	0.995	1.006	0.997	1.000	1.000	1.002	0.992	0.992	1.009	1.011	0.994	1.004	1.008	1.008	1.017	1.012	0.999	0.981	0.994	0.992	1.001	1.000	1.012	1.003
Finaghy	110	0.998	1.017	0.998	1.012	1.003	1.015	1.004	1.010	1.006	1.017	1.004	1.015	1.017	1.019	1.028	1.021	1.030	1.016	1.020	1.026	1.021	1.030	1.033	1.033
Glengormley	110	0.992	1.015	0.993	1.009	0.998	1.013	1.001	1.008	1.005	1.017	1.001	1.013	1.015	1.018	1.025	1.019	1.026	1.013	1.016	1.023	1.016	1.027	1.030	1.030
Hannahstown	110	0.997	1.017	0.998	1.011																				

Appendix A.2 – Draft NI 2010 TLAFs by Market Participant

APPENDIX A.2
DRAFT NORTHERN IRELAND TRANSMISSION LOSS ADJUSTMENT FACTORS 2010

NI Transmission-Connected Generation Station	Unit Identifier		Connected at	Month																								
				January		February		March		April		May		June		July		August		September		October		November		December		
	SO	MO		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	
Ballylumford	B4	GU_500100	Ballylumford 275 kV	0.982	1.007	0.983	1.002	0.989	1.006	0.991	1.001	0.994	1.009	0.991	1.006	1.005	1.011	1.017	1.013	1.019	1.008	1.006	1.017	1.005	1.020	1.011	1.022	
Ballylumford	B5	GU_500281	Ballylumford 275 kV	0.982	1.007	0.983	1.002	0.989	1.006	0.991	1.001	0.994	1.009	0.991	1.006	1.005	1.011	1.017	1.013	1.019	1.008	1.006	1.017	1.005	1.020	1.011	1.022	
Ballylumford	B6	GU_500280	Ballylumford 275 kV	0.982	1.007	0.983	1.002	0.989	1.006	0.991	1.001	0.994	1.009	0.991	1.006	1.005	1.011	1.017	1.013	1.019	1.008	1.006	1.017	1.005	1.020	1.011	1.022	
Ballylumford	BGT1	GU_500150	Ballylumford 110 kV	0.976	1.005	0.975	0.999	0.981	1.003	0.982	0.995	0.984	1.002	0.983	1.000	0.996	1.006	1.010	1.008	1.013	1.005	0.997	1.012	0.997	1.017	1.000	1.019	
Ballylumford	BGT2	GU_500160	Ballylumford 110 kV	0.976	1.005	0.975	0.999	0.981	1.003	0.982	0.995	0.984	1.002	0.983	1.000	0.996	1.006	1.010	1.008	1.013	1.005	0.997	1.012	0.997	1.017	1.000	1.019	
Ballylumford	B10	GU_500140	Ballylumford 110 kV	0.976	1.005	0.975	0.999	0.981	1.003	0.982	0.995	0.984	1.002	0.983	1.000	0.996	1.006	1.010	1.008	1.013	1.005	0.997	1.012	0.997	1.017	1.000	1.019	
Ballylumford	B31	GU_500130	Ballylumford 275 kV	0.982	1.007	0.983	1.002	0.989	1.006	0.991	1.001	0.994	1.009	0.991	1.006	1.005	1.011	1.017	1.013	1.019	1.008	1.006	1.017	1.005	1.020	1.011	1.022	
Ballylumford	B32	GU_500131	Ballylumford 275 kV	0.982	1.007	0.983	1.002	0.989	1.006	0.991	1.001	0.994	1.009	0.991	1.006	1.005	1.011	1.017	1.013	1.019	1.008	1.006	1.017	1.005	1.020	1.011	1.022	
Coolkeeragh	C30	GU_500040	Coolkeeragh 275/110 kV	0.973	1.003	0.975	0.995	0.978	0.997	0.978	0.992	1.001	1.015	0.978	1.001	0.997	1.012	1.003	1.006	1.001	0.995	0.993	1.011	0.995	1.013	1.004	1.015	
Coolkeeragh	CGT8	GU_500170	Coolkeeragh 110 kV	0.971	1.002	0.974	0.994	0.976	0.996	0.976	0.990	1.001	1.015	0.976	1.000	0.996	1.011	1.001	1.005	0.999	0.993	0.991	1.010	0.993	1.012	1.003	1.014	
Kilroot	K1	GU_500060	Kilroot 275 kV	0.986	1.010	0.987	1.004	0.991	1.008	0.995	1.004	0.999	1.012	0.996	1.009	1.010	1.015	1.019	1.015	1.019	1.009	1.010	1.019	1.010	1.023	1.016	1.026	
Kilroot	K2	GU_500070	Kilroot 275 kV	0.986	1.010	0.987	1.004	0.991	1.008	0.995	1.004	0.999	1.012	0.996	1.009	1.010	1.015	1.019	1.015	1.019	1.009	1.010	1.019	1.010	1.023	1.016	1.026	
Kilroot	KGT1	GU_500080	Kilroot 275 kV	0.986	1.010	0.987	1.004	0.991	1.008	0.995	1.004	0.999	1.012	0.996	1.009	1.010	1.015	1.019	1.015	1.019	1.009	1.010	1.019	1.010	1.023	1.016	1.026	
Kilroot	KGT2	GU_500090	Kilroot 275 kV	0.986	1.010	0.987	1.004	0.991	1.008	0.995	1.004	0.999	1.012	0.996	1.009	1.010	1.015	1.019	1.015	1.019	1.009	1.010	1.019	1.010	1.023	1.016	1.026	
Kilroot	KGT3	GU_500820	Kilroot 275 kV	0.986	1.010	0.987	1.004	0.991	1.008	0.995	1.004	0.999	1.012	0.996	1.009	1.010	1.015	1.019	1.015	1.019	1.009	1.010	1.019	1.010	1.023	1.016	1.026	
Kilroot	KGT4	GU_500821	Kilroot 275 kV	0.986	1.010	0.987	1.004	0.991	1.008	0.995	1.004	0.999	1.012	0.996	1.009	1.010	1.015	1.019	1.015	1.019	1.009	1.010	1.019	1.010	1.023	1.016	1.026	
Moyle (Auchencrosh)	M	GU_500200	Auchencrosh 275 kV	0.964	0.989	0.965	0.984	0.971	0.988	0.973	0.983	0.976	0.991	0.973	0.988	1.010	1.018	1.019	1.016	1.019	1.005	1.012	1.020	1.017	1.026	1.002	0.993	1.005
NI Distribution-Connected Generation Station	Unit Identifier		Connected/Embedded at	Month																								
				January		February		March		April		May		June		July		August		September		October		November		December		
	SO	MO		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	
Altahullion (1)	Wind Farm	GU_500210	Limavady 110 kV	0.987	1.010	0.990	1.003	0.992	1.005	0.989	0.997	1.009	1.019	0.988	1.007	1.006	1.015	1.013	1.013	1.013	1.001	1.006	1.016	1.011	1.021	1.022	1.024	
Altahullion (2)	Wind Farm	GU_500211	Limavady 110 kV	0.987	1.010	0.990	1.003	0.992	1.005	0.989	0.997	1.009	1.019	0.988	1.007	1.006	1.015	1.013	1.013	1.001	1.006	1.016	1.011	1.021	1.022	1.024		
Callagheen	Wind Farm	GU_500020	Enniskillen 110 kV	0.995	1.006	0.997	1.000</																					

Appendix B.1 – Draft RoI 2010 TLAFFs by Node

Transmission Station Details		January		February		March		April		May		June		July		August		September		October		November		December	
Station Name	kV	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Ardnacrusha	110	0.987	0.975	0.992	0.985	0.995	0.988	0.993	0.991	0.987	0.983	0.992	0.982	0.978	0.974	0.973	0.972	0.980	0.980	0.973	0.971	0.959	0.957	0.955	0.954
Aghada	110	0.992	0.982	0.992	0.983	0.993	0.983	0.984	0.980	0.966	0.964	0.969	0.960	0.920	0.939	0.918	0.939	0.933	0.953	0.921	0.936	0.926	0.934	0.922	0.928
Aghada	220	0.993	0.983	0.993	0.984	0.991	0.982	0.983	0.979	0.964	0.962	0.967	0.958	0.923	0.939	0.922	0.942	0.939	0.957	0.923	0.937	0.921	0.929	0.917	0.924
Arigna	110	0.988	0.980	0.989	0.982	0.989	0.983	0.990	0.985	0.991	0.986	0.994	0.988	0.999	0.988	1.001	0.990	0.996	0.987	1.001	0.991	1.000	0.991	0.999	0.995
Agannygal	110	0.979	0.964	0.982	0.970	0.981	0.969	0.983	0.974	0.975	0.966	0.972	0.963	0.967	0.957	0.964	0.959	0.967	0.963	0.969	0.958	0.960	0.951	0.954	0.946
Ahane	110	0.988	0.976	0.991	0.984	0.995	0.986	0.993	0.989	0.985	0.981	0.990	0.980	0.975	0.972	0.970	0.971	0.977	0.979	0.972	0.970	0.959	0.957	0.955	0.954
Anner	110	1.050	1.026	1.050	1.028	1.048	1.025	1.040	1.022	1.029	1.012	1.037	1.013	1.019	1.006	1.015	1.005	1.023	1.014	1.022	1.006	1.019	1.003	1.013	1.001
Arklow	110	1.016	1.010	1.011	1.008	1.005	1.004	1.006	1.005	1.008	1.005	1.013	1.009	1.019	1.014	1.012	1.007	1.012	1.011	1.017	1.014	1.015	1.013	1.013	
Arklow	220	1.015	1.009	1.010	1.007	1.005	1.004	1.006	1.004	1.007	1.004	1.012	1.008	1.016	1.012	1.009	1.005	1.011	1.014	1.012	1.013	1.013	1.011	1.011	
Athea	110	0.967	0.954	0.969	0.959	0.974	0.961	0.975	0.967	0.965	0.959	0.969	0.960	0.945	0.942	0.938	0.939	0.948	0.948	0.945	0.940	0.935	0.928	0.932	0.927
Athlone	110	1.001	0.983	1.003	0.988	0.997	0.983	1.001	0.989	0.994	0.979	0.998	0.983	0.996	0.980	0.999	0.988	0.995	0.985	1.004	0.986	1.000	0.983	0.994	0.979
Aughinish	110	0.954	0.947	0.963	0.958	0.967	0.961	0.965	0.966	0.960	0.964	0.960	0.961	0.954	0.961	0.950	0.960	0.949	0.962	0.945	0.952	0.938	0.938	0.931	0.933
Arva	110	1.011	1.005	1.010	1.007	1.010	1.005	1.010	1.005	1.014	1.009	1.016	1.008	1.024	1.012	1.024	1.012	1.021	1.008	1.025	1.014	1.027	1.017	1.026	1.022
Athy	110	1.010	1.000	1.012	1.003	1.004	0.997	1.011	1.004	1.003	0.997	1.006	1.001	1.019	1.011	1.008	1.001	1.003	1.010	1.001	1.011	1.004	1.011	1.005	
Ballywater	110	1.041	1.018	1.036	1.016	1.029	1.012	1.023	1.006	1.020	1.002	1.025	1.006	1.023	1.005	1.017	1.003	1.020	1.009	1.026	1.007	1.035	1.014	1.033	1.013
Booltiagh	110	0.986	0.967	0.989	0.975	0.991	0.976	0.989	0.978	0.982	0.972	0.985	0.971	0.975	0.964	0.971	0.963	0.977	0.969	0.973	0.962	0.960	0.950	0.956	0.948
Baltrasna	110	1.017	1.021	1.012	1.018	1.006	1.014	1.012	1.017	1.020	1.021	1.016	1.019	1.031	1.031	1.027	1.028	1.018	1.025	1.029	1.032	1.027	1.034	1.026	1.034
Ballylickey	110	0.987	0.965	0.988	0.967	0.991	0.968	0.979	0.962	0.961	0.949	0.969	0.949	0.932	0.931	0.929	0.931	0.947	0.945	0.936	0.930	0.937	0.927	0.933	0.924
Ballybeg	110	1.016	1.010	1.008	1.004	1.004	1.005	1.005	1.008	1.005	1.013	1.010	1.020	1.016	1.013	1.007	1.013	1.018	1.015	1.016	1.014	1.016	1.014	1.014	
Blake	110	1.009	1.001	1.011	1.006	1.001	0.998	1.011	1.007	1.003	1.000	1.005	1.005	1.028	1.022	1.015	1.017	1.003	1.008	1.014	1.008	1.015	1.010	1.017	1.012
Binbane	110	0.959	0.943	0.965	0.956	0.965	0.954	0.964	0.959	0.969	0.963	0.980	0.964	0.980	0.964	0.978	0.961	0.972	0.960	0.977	0.960	0.983	0.960	0.975	0.971
Baroda	110	1.009	0.999	1.013	1.005	1.002	0.997	1.013	1.008	1.002	0.999	1.005	1.004	1.030	1.023	1.015	1.017	1.002	1.007	1.013	1.005	1.015	1.007	1.017	1.011
Ballydine	110	1.041	1.020	1.040	1.022	1.038	1.019	1.031	1.017	1.021	1.008	1.028	1.009	1.012	1.002	1.008	1.002	1.015	1.010	1.015	1.015	1.002	1.002	1.009	
Barnahely	110	0.994	0.984	0.994	0.985	0.997	0.986	0.989	0.982	0.972	0.967	0.975	0.964	0.932	0.945	0.930	0.946	0.945	0.960	0.933	0.943	0.936	0.941	0.932	0.936
Bellacorick	110	1.032	1.005	1.035	1.007	1.037	1.011	1.032	1.008	1.029	1.005	1.033	1.006	1.036	1.006	1.036	1.005	1.052	1.022	1.046	1.014	1.044	1.019		
Bandon	110	1.006	0.985	1.006	0.987	1.009	0.988	0.999	0.984	0.982	0.969	0.987	0.967	0.944	0.949	0.942	0.949	0.960	0.963	0.949	0.947	0.950	0.945	0.946	0.942
Barrymore	110	1.013	0.998	1.014	1.000	1.016	0.9																		

EIRGRID INDICATIVE TRANSMISSION LOSS ADJUSTMENT FACTORS 2010

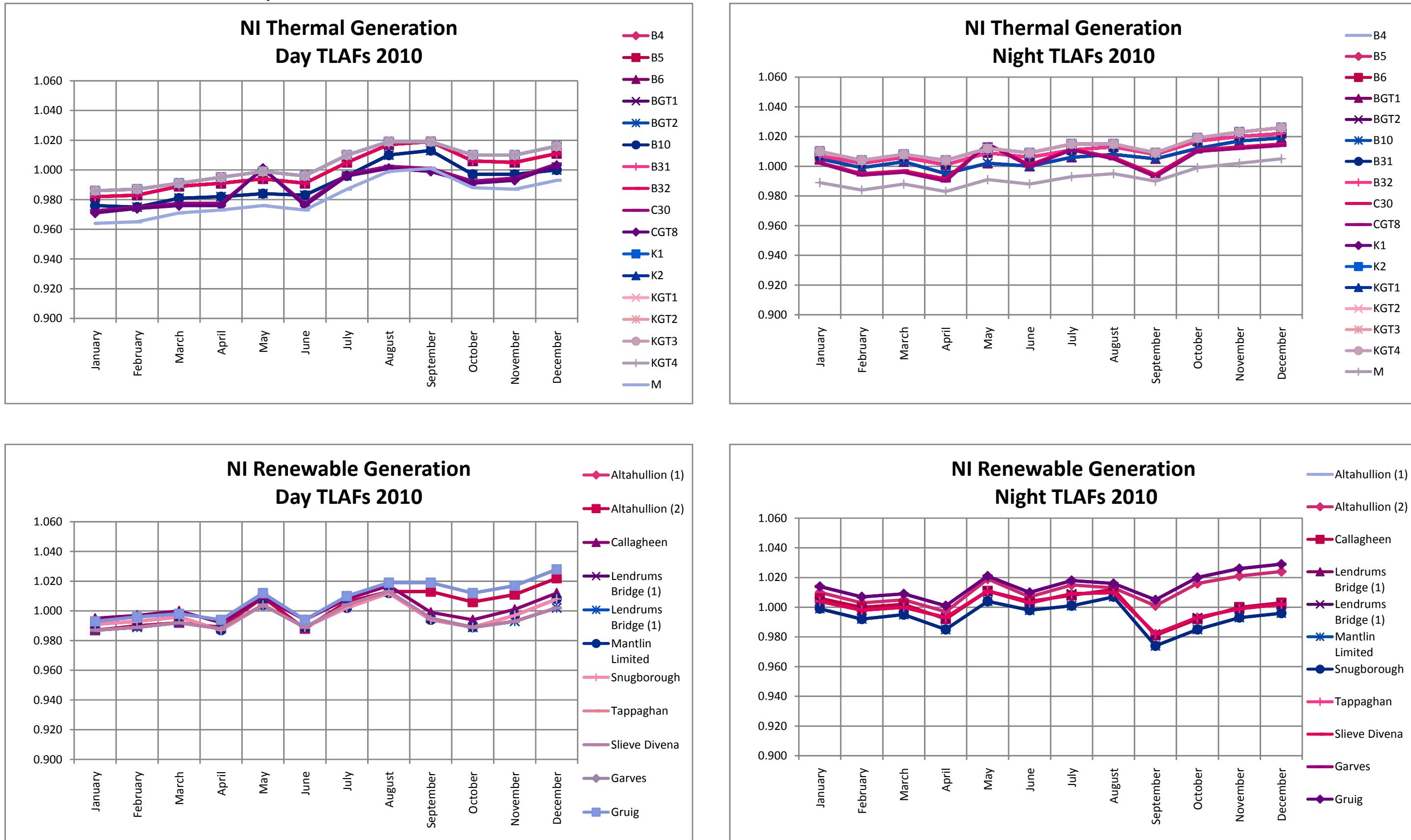
Transmission Station Details		January		February		March		April		May		June		July		August		September		October		November		December	
Station Name	kV	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Hartnett's Cross	110	0.978	0.968	0.979	0.970	0.983	0.972	0.978	0.972	0.965	0.961	0.970	0.960	0.940	0.946	0.937	0.945	0.951	0.958	0.940	0.945	0.933	0.933	0.929	0.930
Inniscarra	110	0.988	0.981	0.990	0.982	0.995	0.984	0.988	0.981	0.974	0.967	0.979	0.966	0.945	0.952	0.942	0.951	0.956	0.964	0.943	0.950	0.939	0.943	0.936	0.939
Inchicore	220	1.011	1.010	1.005	1.008	0.999	1.004	1.003	1.006	1.008	1.008	1.010	1.011	1.022	1.020	1.015	1.017	1.007	1.015	1.019	1.020	1.014	1.019	1.013	1.017
Ikerrin	110	1.029	1.006	1.030	1.010	1.026	1.005	1.024	1.008	1.014	0.998	1.020	1.000	1.009	0.994	1.006	0.996	1.005	0.998	1.011	0.995	1.005	0.990	0.998	0.985
Irishtown	220	1.008	1.007	1.001	1.004	0.995	1.000	0.999	1.002	1.003	1.004	1.008	1.009	1.018	1.017	1.011	1.014	1.002	1.012	1.015	1.016	1.011	1.015	1.009	1.013
Knockraha	110	0.991	0.981	0.991	0.983	0.995	0.984	0.986	0.981	0.973	0.969	0.977	0.968	0.943	0.953	0.941	0.954	0.956	0.968	0.944	0.951	0.937	0.940	0.933	0.937
Knockraha	220	0.986	0.977	0.986	0.978	0.990	0.980	0.982	0.978	0.969	0.967	0.973	0.966	0.941	0.951	0.939	0.952	0.953	0.966	0.941	0.949	0.941	0.943	0.937	0.940
Kilbarry	110	0.998	0.988	0.999	0.990	1.004	0.990	0.994	0.986	0.979	0.972	0.983	0.970	0.946	0.954	0.944	0.954	0.959	0.968	0.947	0.952	0.947	0.943	0.943	0.943
Kilteel	110	1.017	1.011	1.016	1.013	1.009	1.007	1.015	1.012	1.012	1.009	1.014	1.012	1.031	1.025	1.022	1.021	1.013	1.016	1.024	1.018	1.021	1.019	1.021	1.019
Kilkenny	110	1.041	1.025	1.038	1.024	1.033	1.021	1.037	1.023	1.034	1.018	1.038	1.021	1.036	1.022	1.030	1.019	1.031	1.024	1.037	1.022	1.045	1.028	1.042	1.031
Killoran	110	0.988	0.976	0.991	0.984	0.995	0.986	0.993	0.989	0.985	0.981	0.990	0.980	0.975	0.972	0.970	0.977	0.979	0.972	0.970	0.959	0.957	0.955	0.954	
Killonan	220	0.985	0.974	0.987	0.980	0.990	0.981	0.989	0.984	0.980	0.976	0.985	0.977	0.969	0.965	0.967	0.972	0.975	0.969	0.968	0.959	0.957	0.956	0.954	
Knockearagh	110	0.978	0.961	0.979	0.964	0.982	0.965	0.978	0.967	0.966	0.957	0.971	0.958	0.945	0.943	0.941	0.953	0.952	0.946	0.942	0.938	0.930	0.935	0.929	
Knockumber	110	1.023	1.027	1.020	1.024	1.017	1.022	1.020	1.022	1.025	1.026	1.024	1.026	1.037	1.034	1.036	1.032	1.037	1.039	1.037	1.040				
Kellis	110	1.018	1.011	1.014	1.010	1.010	1.007	1.011	1.008	1.010	1.006	1.014	1.009	1.018	1.013	1.011	1.010	1.008	1.012	1.015	1.011	1.016	1.014	1.014	1.013
Keltney	220	1.015	1.009	1.012	1.008	1.008	1.005	1.009	1.006	1.008	1.004	1.011	1.006	1.014	1.010	1.008	1.005	1.009	1.012	1.009	1.013	1.011	1.011	1.010	
Kiltoy	110	0.955	0.927	0.959	0.937	0.956	0.935	0.950	0.936	0.954	0.938	0.965	0.942	0.965	0.939	0.962	0.936	0.959	0.936	0.965	0.935	0.981	0.941	0.974	0.954
Kinnead	110	1.024	1.022	1.020	1.020	1.014	1.016	1.018	1.019	1.021	1.019	1.023	1.022	1.035	1.031	1.029	1.028	1.021	1.026	1.033	1.030	1.029			
Killotern	110	1.026	1.012	1.024	1.011	1.020	1.009	1.016	1.007	1.010	1.001	1.015	1.003	1.005	1.000	1.009	1.005	1.006	1.007	1.000	1.011	1.003	1.009	1.002	
Lanesboro	110	0.991	0.974	0.992	0.976	0.987	0.972	0.989	0.975	0.989	0.977	0.992	0.979	0.992	0.977	0.991	0.977	0.990	0.987	0.976	0.999	0.982	0.998	0.984	0.996
Louth	110	1.006	1.016	1.004	1.012	1.004	1.012	1.007	1.011	1.012	1.016	1.009	1.014	1.022	1.022	1.025	1.021	1.022	1.017	1.023	1.025	1.022	1.028	1.025	1.029
Louth	220	1.005	1.014	1.003	1.010	1.003	1.010	1.006	1.009	1.010	1.014	1.008	1.013	1.021	1.020	1.023	1.019	1.020	1.015	1.021	1.023	1.020	1.025	1.023	1.027
Limerick	110	0.985	0.973	0.990	0.983	0.994	0.985	0.992	0.988	0.985	0.981	0.989	0.980	0.976	0.973	0.971	0.977	0.979	0.972	0.970	0.959	0.957	0.955	0.953	
Lisdrum	110	1.024	1.023	1.023	1.021	1.022	1.020	1.022	1.017	1.025	1.021	1.025	1.020	1.036	1.025	1.031	1.021	1.039	1.029	1.038	1.033	1.040			
Longpoint	220	0.993	0.983	0.993	0.984	0.991	0.982	0.983	0.979	0.964	0.962	0.967	0.958	0.923	0.939	0.957	0.923	0.929	0.917	0.924					
Letterkenny	110	0.955	0.927	0.959	0.938	0.956	0.935	0.950	0.936	0.954	0.939	0.965	0.942	0.965	0.939	0.963	0.936	0.959	0.942	0.974	0.954				
Liberty Street	110	0.997	0.988	0.997	0.980	1.002	0.989	0.994	0.986	0.978	0.972	0.981	0.969	0.942	0.952	0.940	0.952								

Appendix B.2 – Draft RoI 2010 TLAFs by Market Participant

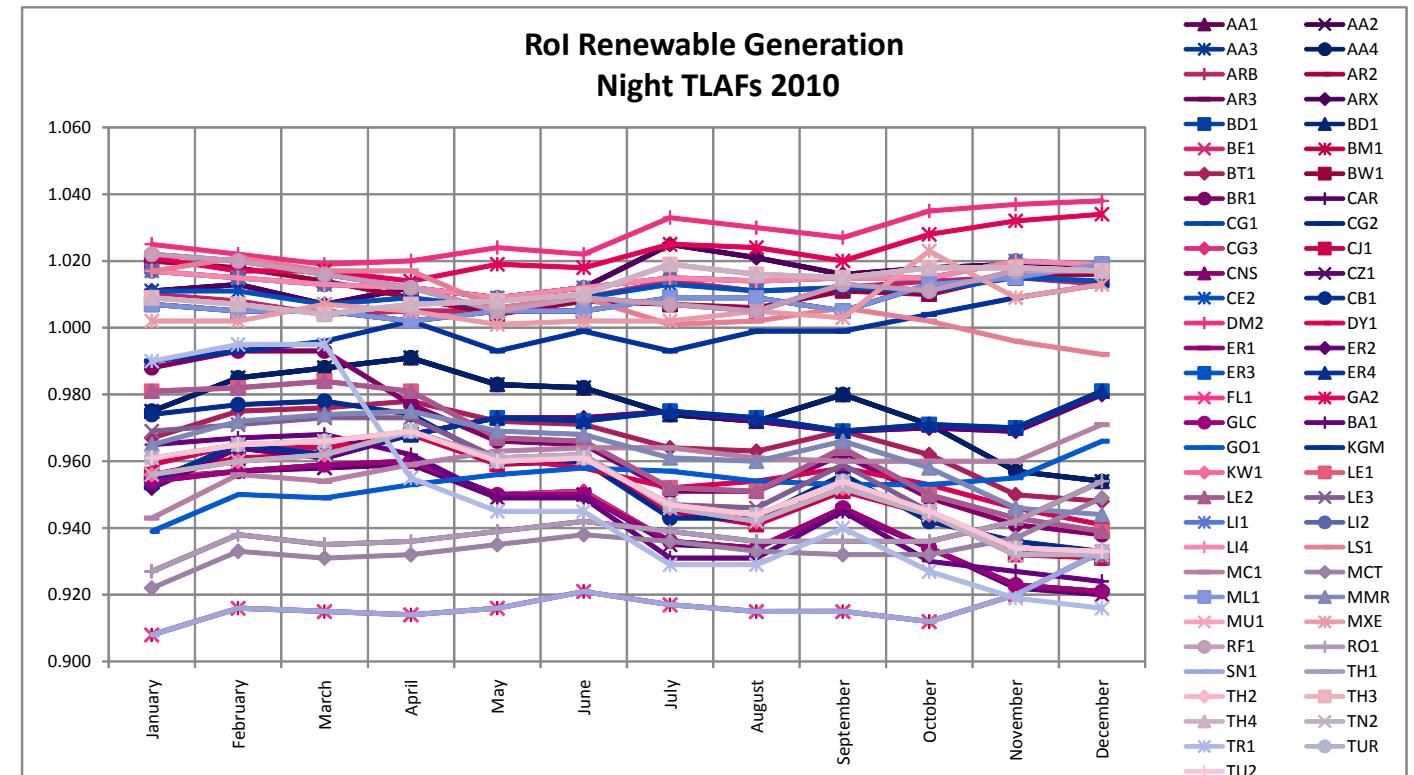
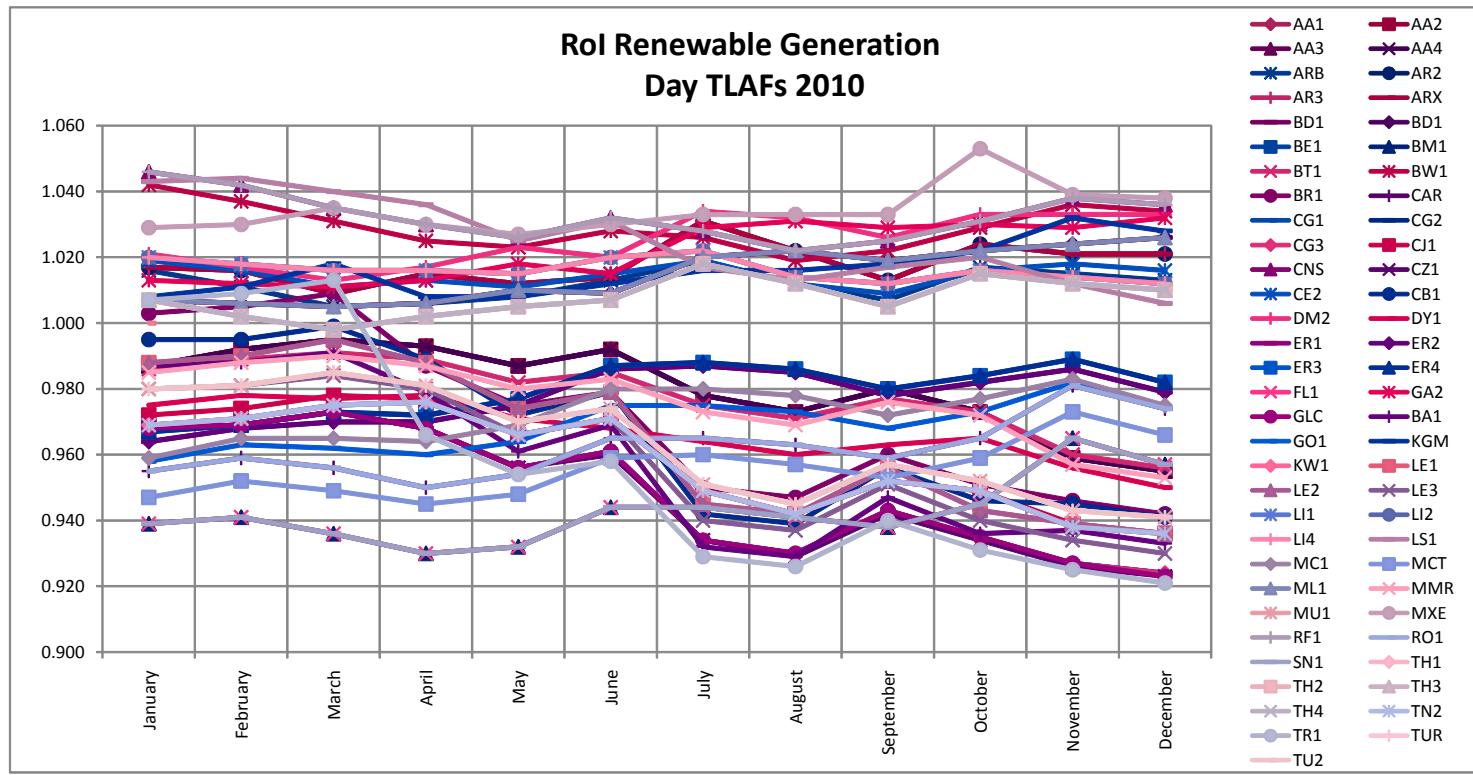
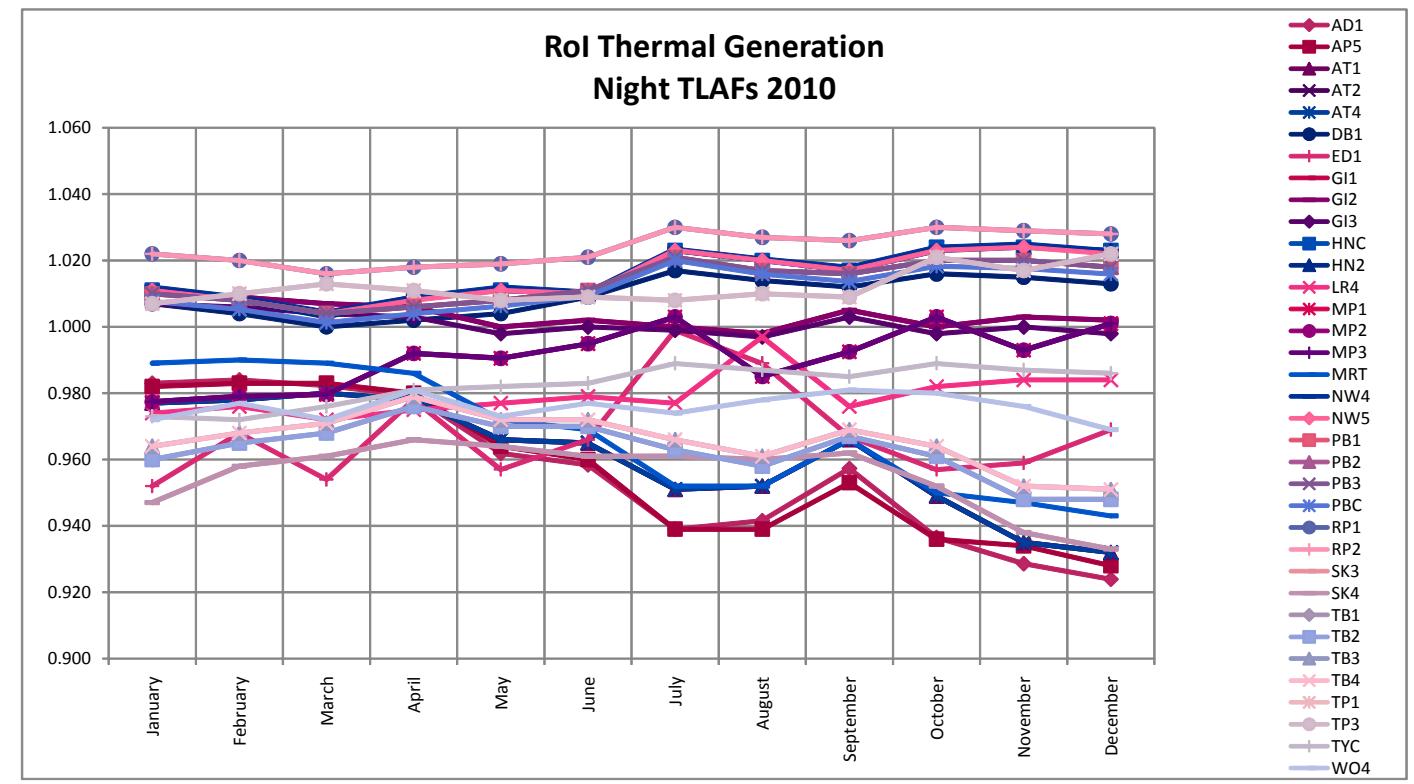
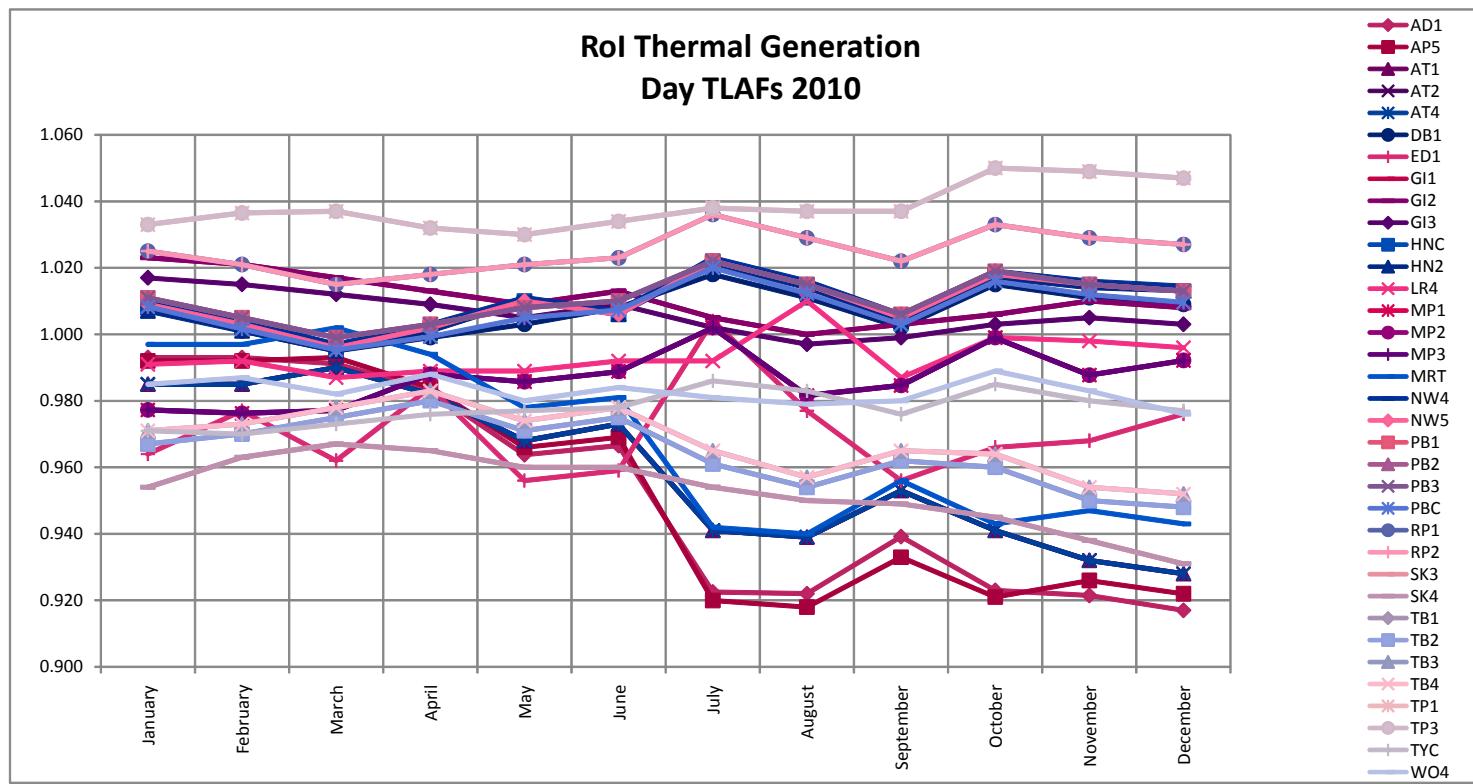
Market Participant Name	Unit Id	Transmission Station	kV	January		February		March		April		May		June		July		August		September		October		November			
				Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
Ardnacrusha (ESB)	AA1	Ardnacrusha	110	0.987	0.975	0.992	0.985	0.995	0.988	0.993	0.981	0.987	0.983	0.992	0.982	0.978	0.974	0.973	0.972	0.980	0.980	0.973	0.971	0.959	0.957	0.955	0.954
Ardnacrusha (ESB)	AA2	Ardnacrusha	110	0.987	0.975	0.992	0.985	0.995	0.988	0.993	0.981	0.987	0.983	0.992	0.982	0.978	0.974	0.973	0.972	0.980	0.980	0.973	0.971	0.959	0.957	0.955	0.954
Ardnacrusha (ESB)	AA3	Ardnacrusha	110	0.987	0.975	0.992	0.985	0.995	0.988	0.993	0.981	0.987	0.983	0.992	0.982	0.978	0.974	0.973	0.972	0.980	0.980	0.973	0.971	0.959	0.957	0.955	0.954
Ardnacrusha (ESB)	AA4	Ardnacrusha	110	0.987	0.975	0.992	0.985	0.995	0.988	0.993	0.981	0.987	0.983	0.992	0.982	0.978	0.974	0.973	0.972	0.980	0.980	0.973	0.971	0.959	0.957	0.955	0.954
Aghada (ESB)	AD1	Aghada	220	0.993	0.983	0.993	0.984	0.991	0.982	0.983	0.979	0.964	0.962	0.967	0.958	0.923	0.939	0.922	0.942	0.939	0.957	0.923	0.937	0.921	0.929	0.917	0.924
Aghada PCP (ESB)	AP5	Aghada	110	0.992	0.982	0.992	0.983	0.993	0.983	0.984	0.980	0.966	0.964	0.969	0.920	0.939	0.918	0.939	0.933	0.953	0.921	0.936	0.926	0.934	0.922	0.928	
Arklow Banks (Arklow Energy Ltd.)	ARB	Arklow	110	1.016	1.010	1.011	1.008	1.005	1.004	1.006	1.005	1.005	1.013	1.009	1.019	1.014	1.012	1.011	1.007	1.012	1.017	1.014	1.015	1.015	1.013	1.013	
Aghada (ESB)	AT1	Aghada	220	0.985	0.977	0.985	0.978	0.990	0.980	0.982	0.978	0.968	0.966	0.973	0.965	0.941	0.951	0.939	0.952	0.953	0.966	0.941	0.949	0.932	0.935	0.928	0.932
Aghada (ESB)	AT2	Aghada	220	0.985	0.977	0.985	0.978	0.990	0.980	0.982	0.978	0.968	0.966	0.973	0.965	0.941	0.951	0.939	0.952	0.953	0.966	0.941	0.949	0.932	0.935	0.928	0.932
Aghada (ESB)	AT4	Aghada	220	0.985	0.977	0.985	0.978	0.990	0.980	0.982	0.978	0.968	0.966	0.973	0.965	0.941	0.951	0.939	0.952	0.953	0.966	0.941	0.949	0.932	0.935	0.928	0.932
Arthurstown Landfill Phase 2 (Irish Power Systems Ltd.)	AR2	Kilteel	110	1.017	1.011	1.016	1.013	1.009	1.007	1.015	1.012	1.012	1.009	1.014	1.012	1.031	1.025	1.022	1.021	1.021	1.016	1.024	1.018	1.021	1.019	1.021	
Arthurstown Landfill Phase 3 (Irish Power Systems Ltd.)	AR3	Kilteel	110	1.017	1.011	1.016	1.013	1.009	1.007	1.015	1.012	1.012	1.009	1.014	1.012	1.031	1.025	1.022	1.021	1.021	1.016	1.024	1.018	1.021	1.019	1.021	
Ratrussan Wind Farm (Bindoo Wind Farm Ltd.)	BD1	Ratrussan	110	1.007	1.007	1.006	1.005	1.005	1.004	1.006	1.002	1.001	1.005	1.009	1.020	1.009	1.022	1.009	1.019	1.005	1.022	1.013	1.024	1.015	1.026	1.019	
Mountain Lodge (Bindoo Wind Farm Ltd.)	BD1	Ratrussan	110	1.007	1.007	1.006	1.005	1.005	1.004	1.006	1.002	1.001	1.005	1.009	1.020	1.009	1.022	1.009	1.019	1.005	1.022	1.013	1.024	1.015	1.026	1.019	
Beale Hill	BE1	Trien	110	0.969	0.956	0.971	0.960	0.975	0.969	0.966	0.971	0.962	0.949	0.946	0.942	0.952	0.952	0.949	0.944	0.938	0.915	0.945	0.912	0.965	0.920	0.957	0.933
Beam Hill (Beam Wind Ltd.)	BM1	Trillick	110	0.939	0.908	0.941	0.916	0.936	0.915	0.930	0.914	0.932	0.916	0.944	0.921	0.944	0.917	0.941	0.915	0.938	0.915	0.945	0.912	0.965	0.920	0.957	0.933
Bootlough (Bootlough Windfarm Ltd.)	BT1	Bootlough	110	0.986	0.967	0.989	0.975	0.991	0.976	0.989	0.978	0.982	0.972	0.985	0.971	0.975	0.964	0.971	0.963	0.977	0.969	0.973	0.962	0.980	0.950	0.956	0.948
Ballywater (Ballywater Windfarms Ltd.)	BW1	Crane	110	1.042	1.020	1.037	1.018	1.031	1.014	1.025	1.019	1.023	1.004	1.028	1.006	1.026	1.007	1.019	1.006	1.022	1.011	1.029	1.010	1.036	1.016	1.034	1.016
Brurree Hydro (Sievreaghane Power Ltd.)	BR1	Charleville	110	1.003	0.981	1.005	0.993	1.009	0.993	0.987	0.977	0.975	0.966	0.979	0.965	0.950	0.951	0.947	0.951	0.960	0.962	0.951	0.949	0.946	0.942	0.938	0.936
Cark Wind Farm	CAR	Letterkenny	110	0.955	0.927	0.959	0.938	0.959	0.935	0.950	0.936	0.954	0.939	0.955	0.942	0.958	0.950	0.959	0.936	0.965	0.936	0.981	0.942	0.974	0.954		
Coomeagearlahy (SWS Kilgarvan Windfarm Ltd.)	CG1	Coomeagearlahy	110	0.968	0.955	0.969	0.957	0.973	0.959	0.968	0.960	0.956	0.950	0.961	0.951	0.934	0.936	0.930	0.934	0.943	0.946	0.935	0.934	0.927	0.923	0.924	0.921
Coomeagearlahy (SWS Kilgarvan Windfarm Ltd.)	CG2	Coomeagearlahy	110	0.968	0.955	0.969	0.957	0.973	0.959	0.968	0.960	0.956	0.950	0.961	0.951	0.934	0.936	0.930	0.934	0.943	0.946	0.935	0.934	0.927	0.923	0.924	0.921
Coomeagearlahy (SWS Kilgarvan Windfarm Ltd.)	CG3	Coomeagearlahy	110	0.968	0.955	0.969	0.957	0.973	0.959	0.968	0.960	0.956	0.950	0.961	0.951	0.934	0.936	0.930	0.934	0.943	0.946	0.935	0.934	0.927	0.923	0.924	0.921
Clahane Wind Farm (Pallas Wind Farm Ltd.)	CJ1	Cishane	110	0.972	0.956	0.974	0.961	0.978	0.962	0.968	0.966	0.959	0.971	0.960	0.949	0.945	0.942	0.952	0.951	0.949	0.944	0.939	0.932	0.936	0.933	0.931	
Carnsore (Hibernian)	CNS	Wexford	110																								

Appendix C: Analysis of 2010 TLAFs

C.1 Northern Ireland Market Participant 2010 TLAFs



C.2 RoI Market Participant 2010 TLAFFS



C.3 Change in NI TLAFFs from 2009 to 2010

NI Transmission Connected Generation Station	Unit Identifier		Month																								Average		
			January		February		March		April		May		June		July		August		September		October		November		December				
	SO	MO	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night			
Ballylumford	B4	GU_500100	1.70%	4.20%	1.60%	3.80%	2.00%	4.10%	2.90%	3.10%	2.80%	3.80%	2.00%	2.50%	3.90%	3.20%	5.10%	3.50%	4.50%	1.80%	2.60%	1.20%	2.30%	2.30%	3.10%	3.30%	0.975	1.005	2.97%
Ballylumford	B5	GU_500281	1.70%	4.20%	1.60%	3.80%	2.00%	4.10%	2.90%	3.10%	2.80%	3.80%	2.00%	2.50%	3.90%	3.20%	5.10%	3.50%	4.50%	1.80%	2.60%	1.20%	2.30%	2.30%	3.10%	3.30%	0.975	1.005	2.97%
Ballylumford	B6	GU_500280	1.70%	4.20%	1.60%	3.80%	2.00%	4.10%	2.90%	3.10%	2.80%	3.80%	2.00%	2.50%	3.90%	3.20%	5.10%	3.50%	4.50%	1.80%	2.60%	1.20%	2.30%	2.30%	3.10%	3.30%	0.975	1.005	2.97%
Ballylumford	BGT1	GU_500150	2.00%	4.20%	1.60%	3.70%	2.10%	4.20%	2.70%	2.70%	2.50%	3.30%	1.80%	2.20%	3.40%	2.90%	4.90%	3.20%	4.30%	1.70%	2.10%	0.90%	2.10%	2.20%	2.70%	3.20%	0.971	0.999	2.78%
Ballylumford	BGT2	GU_500160	2.00%	4.20%	1.60%	3.70%	2.10%	4.20%	2.70%	2.70%	2.50%	3.30%	1.80%	2.20%	3.40%	2.90%	4.90%	3.20%	4.30%	1.70%	2.10%	0.90%	2.10%	2.20%	2.70%	3.20%	0.971	0.999	2.78%
Ballylumford	B10	GU_500140	2.00%	4.20%	1.60%	3.70%	2.10%	4.20%	2.70%	2.70%	2.50%	3.30%	1.80%	2.20%	3.40%	2.90%	4.90%	3.20%	4.30%	1.70%	2.10%	0.90%	2.10%	2.20%	2.70%	3.20%	0.971	0.999	2.78%
Ballylumford	B31	GU_500130	1.70%	4.20%	1.60%	3.80%	2.00%	4.10%	2.90%	3.10%	2.80%	3.80%	2.00%	2.50%	3.90%	3.20%	5.10%	3.50%	4.50%	1.80%	2.60%	1.20%	2.30%	2.30%	3.10%	3.30%	0.975	1.005	2.97%
Ballylumford	B32	GU_500131																											
Coolkeeragh	C30	GU_500040	1.65%	3.95%	1.60%	3.30%	1.75%	3.60%	2.25%	2.35%	4.15%	4.60%	1.25%	2.30%	3.50%	3.45%	4.15%	3.00%	3.10%	0.65%	1.65%	0.80%	1.85%	1.80%	3.10%	2.80%	0.971	0.997	2.61%
Coolkeeragh	CGT8	GU_500170	1.80%	5.00%	2.10%	4.80%	1.40%	4.30%	2.60%	3.30%	5.00%	4.90%	0.70%	1.10%	4.20%	2.70%	4.90%	2.40%	3.50%	-0.10%	2.20%	0.30%	2.40%	1.30%	3.60%	2.20%	0.968	0.996	2.77%
Kilroot	K1	GU_500060	1.80%	4.20%	1.80%	3.70%	1.90%	4.00%	2.90%	3.10%	3.10%	3.80%	2.30%	2.70%	4.10%	3.40%	5.00%	3.40%	4.30%	1.70%	2.80%	1.60%	2.60%	2.50%	3.30%	3.50%	0.977	1.008	3.06%
Kilroot	K2	GU_500070	1.80%	4.20%	1.80%	3.70%	1.90%	4.00%	2.90%	3.10%	3.10%	3.80%	2.30%	2.70%	4.10%	3.40%	5.00%	3.40%	4.30%	1.70%	2.80%	1.60%	2.60%	2.50%	3.30%	3.50%	0.977	1.008	3.06%
Kilroot	KGT1	GU_500080	1.80%	4.20%	1.80%	3.70%	1.90%	4.00%	2.90%	3.10%	3.10%	3.80%	2.30%	2.70%	4.10%	3.40%	5.00%	3.40%	4.30%	1.70%	2.80%	1.60%	2.60%	2.50%	3.30%	3.50%	0.977	1.008	3.06%
Kilroot	KGT2	GU_500090	1.80%	4.20%	1.80%	3.70%	1.90%	4.00%	2.90%	3.10%	3.10%	3.80%	2.30%	2.70%	4.10%	3.40%	5.00%	3.40%	4.30%	1.70%	2.80%	1.60%	2.60%	2.50%	3.30%	3.50%	0.977	1.008	3.06%
Kilroot	KGT3	GU_500820																										1.008	
Kilroot	KGT4	GU_500821																											
Moyle (Auchencrosh)	M	GU_500200	1.70%	4.20%	1.60%	3.80%	2.00%	4.10%	2.90%	3.10%	2.80%	3.80%	2.00%	2.50%	3.80%	3.20%	5.10%	3.50%	4.50%	1.80%	2.60%	1.20%	2.20%	2.20%	3.10%	3.30%	0.957	0.987	2.96%

NI Distribution- Connected Generation Station	Unit Identifier		Month																								Average		
			January		February		March		April		May		June		July		August		September		October		November		December				
	SO	MO	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night			
Altahullion (1)	Wind Farm	GU_500210	2.00%	5.00%	2.20%	4.80%	2.00%	4.80%	3.10%	3.60%	5.00%	5.20%	1.40%	2.10%	4.60%	3.30%	5.40%	3.30%	4.10%	0.80%	2.80%	0.80%	3.10%	2.10%	4.30%	3.00%	0.974	1.007	3.28%
Altahullion (2)	Wind Farm	GU_500211	2.00%	5.00%	2.20%	4.80%	2.00%	4.80%	3.10%	3.60%	5.00%	5.20%	1.40%	2.10%	4.60%	3.30%	5.40%	3.30%	4.10%	0.80%	2.80%	0.80%	3.10%	2.10%	4.30%	3.00%	0.974	1.007	3.28%
Callagheen	Wind Farm	GU_500020	-0.10%	3.60%	0.10%	3.00%	0.00%	3.10%	1.10%	2.20%	2.80%	3.90%	0.30%	2.00%	3.80%	3.30%	4.80%	4.20%	1.70%	-0.30%	1.50%	0.40%	1.60%</						

C.4 Change in ROI TLAFs from 2009 to 2010

Market Participant Name	Unit Id	Transmission Station	kV	Difference Between 2009 and 2010 Draft TLAFs :- ROI												Average 2009 TLAF	Average 2010 TLAF	% Change in TLAF										
				January		February		March		April		May		June		July		August		September		October		November		December		
				Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night			
Ardnacrusha (ESB)	AA1	Ardnacrusha	110	-4.10%	-4.90%	-3.80%	-4.00%	-4.40%	-4.60%	-4.10%	-4.30%	-3.50%	-3.70%	-4.10%	-4.30%	-5.40%	-5.70%	-6.10%	-6.40%	-6.10%	-6.40%	-6.20%	-6.50%	-6.30%	-6.60%	-2.70%		
Ardnacrusha (ESB)	AA2	Ardnacrusha	110	-4.10%	-4.90%	-3.80%	-4.00%	-4.40%	-4.60%	-4.10%	-4.30%	-3.50%	-3.70%	-4.10%	-4.30%	-5.40%	-5.70%	-6.10%	-6.40%	-6.10%	-6.40%	-6.20%	-6.50%	-6.30%	-6.60%	-2.70%		
Ardnacrusha (ESB)	AA3	Ardnacrusha	110	-4.10%	-4.90%	-3.80%	-4.00%	-4.40%	-4.60%	-4.10%	-4.30%	-3.50%	-3.70%	-4.10%	-4.30%	-5.40%	-5.70%	-6.10%	-6.40%	-6.10%	-6.40%	-6.20%	-6.50%	-6.30%	-6.60%	-2.70%		
Ardnacrusha (ESB)	AA4	Ardnacrusha	110	-4.10%	-4.90%	-3.80%	-4.00%	-4.40%	-4.60%	-4.10%	-4.30%	-3.50%	-3.70%	-4.10%	-4.30%	-5.40%	-5.70%	-6.10%	-6.40%	-6.10%	-6.40%	-6.20%	-6.50%	-6.30%	-6.60%	-2.70%		
Aghada (ESB)	AD1	Aghada	220	-5.40%	-5.90%	-5.50%	-6.30%	-5.29%	-6.37%	-6.79%	-6.47%	-7.32%	-7.12%	-8.25%	-8.68%	-10.25%	-10.30%	-10.00%	-8.64%	-8.46%	-8.27%	-4.30%	-3.35%	-3.65%	-1.34%	-4.80%	-3.11%	
Aghada (PCP (ESB))	AP5	Aghada	110	-5.80%	-6.30%	-5.80%	-6.70%	-5.30%	-6.50%	-6.90%	-6.70%	-7.20%	-7.20%	-8.30%	-8.90%	-13.70%	-9.80%	-13.50%	-9.60%	-10.40%	-6.50%	-10.50%	-5.90%	-9.70%	-6.60%	-10.70%	-8.30%	
Arklow Banks (Arklow Energy Ltd.)	ARB	Arklow	110	1.00%	0.20%	0.70%	0.00%	0.00%	0.60%	0.20%	-0.10%	-0.30%	-0.70%	1.00%	0.40%	1.40%	0.90%	0.70%	0.10%	0.00%	0.40%	0.20%	0.00%	0.10%	1.008	1.011	0.31%	
Aghada (ESB)	AT1	Aghada	220	-6.20%	-6.50%	-6.30%	-6.90%	-5.40%	-6.60%	-6.90%	-6.70%	-7.60%	-7.60%	-8.40%	-8.10%	-8.30%	-8.60%	-8.30%	-1.60%	-2.50%	0.90%	-2.60%	-0.70%	-3.70%	-2.30%	1.012	0.960	-5.13%
Aghada (ESB)	AT2	Aghada	220	-6.20%	-6.50%	-6.30%	-6.90%	-5.40%	-6.60%	-6.90%	-6.70%	-7.60%	-7.60%	-8.40%	-8.10%	-8.30%	-8.60%	-8.30%	-1.60%	-2.50%	0.90%	-2.60%	-0.70%	-3.70%	-2.30%	1.012	0.960	-5.13%
Aghada (ESB)	AT4	Aghada	220	-6.20%	-6.50%	-6.30%	-6.90%	-5.40%	-6.60%	-6.90%	-6.70%	-7.60%	-7.60%	-8.40%	-8.10%	-8.30%	-8.60%	-8.30%	-1.60%	-2.50%	0.90%	-2.60%	-0.70%	-3.70%	-2.30%	1.012	0.960	-5.13%
Arthurstown Landfill Phase 2 (Irish Power Systems Ltd.)	AR2	Kilteel	110																							1.017		
Arthurstown Landfill Phase 3 (Irish Power Systems Ltd.)	AR3	Kilteel	110																							1.017		
Rattrusen Wind Farm (Bindo Wind Farm Ltd.)	BD1	Rattrusen	110	1.20%	0.40%	1.30%	0.60%	0.20%	-0.30%	1.40%	1.00%	0.00%	-0.20%	1.30%	0.90%	2.20%	1.80%	0.60%	0.70%	0.00%	0.30%	0.40%	0.40%	1.010	1.017	0.67%		
Mountan Lodge (Bindo Wind Farm Ltd.)	BD1	Rattrusen	110	0.40%	1.20%	0.60%	1.00%	0.20%	-0.30%	1.30%	1.00%	0.00%	-0.20%	1.20%	0.90%	2.20%	1.80%	0.60%	0.70%	0.00%	0.30%	0.40%	0.40%	1.011	1.017	0.33%		
Beam Hill (Bindo Wind Farm Ltd.)	BE1	Trillick	110	-3.40%	-4.40%	-3.00%	-4.40%	-2.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	0.955	-2.83%	
Beam Hill (Beam Wind Ltd.)	BM1	Trillick	110	-3.60%	-3.80%	-4.80%	-3.60%	-3.20%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	0.949	0.930	-1.95%
Boatlaigh (Boatlaigh Windfarm Ltd.)	BT1	Boatlaigh	110	-4.60%	-5.60%	-4.50%	-5.40%	-5.10%	-5.10%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	-4.90%	1.015	0.972	-4.25%
Ballywater (Ballywater Windfarms Ltd.)	BW1	Crane	110	-0.50%	-1.30%	-0.90%	-1.70%	-1.50%	-2.20%	-1.80%	-1.90%	-2.10%	-2.30%	-1.00%	-0.60%	-0.30%	-0.00%	-0.30%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	1.028	1.020	-0.77%
Bruene Hydro (Sievreeadagh Power Ltd.)	BR1	Chareville	110																							0.968		
Cark Wind Farm	CAR	Letterkenny	110	-2.80%	-3.10%	-3.80%	-2.50%	-2.80%	-2.70%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	-1.30%	0.968	0.950	-1.73%	
Coomegaragh (SWIS Kilgarvan Windfarm Ltd.)	CG1	Coomegaragh	110	-5.80%	-6.30%	-5.70%	-6.60%	-6.80%	-6.20%	-6.50%	-6.50%	-6.40%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	-6.50%	1.000	0.946	-5.36%	
Coomegaragh (SWIS Kilgarvan Windfarm Ltd.)	CG2	Coomegaragh	110																							0.946		
Coomegaragh (SWIS Kilgarvan Windfarm Ltd.)	CG3	Coomegaragh	110																							0.946		
Clahane Wind Farm (Pallas Wind Farm Ltd.)	CJ1	Clahane	110	-3.40%	-4.70%	-3.20%	-4.60%	-2.20%	-4.20%	-3.80%	-3.80%	-2.90%	-3.20%	-3.40%	-3.40%	-4.90%	-4.90%	-5.60%	-5.80%	-4.30%	-4.30%	-1.50%	-1.50%	-1.50%	-1.50%	0.987	0.955	-3.22%
Carnsore (Hibernian)	CNS	Wexford	110	-1.30%	-2.20%	-1.60%	-2.60%	-2.30%	-3.10%	-2.40%	-2.80%	-3.00%	-1.70%	-1.60%	-1.80%	-1.80%	-1.90%	-1.90%	-1.90%	-1.90%	-1.90%	-1.90%	-1.90%	-1.90%	-1.90%	1.041	1.023	-1.87%
Coomeacoragh Wind Farm (Coomeacoragh Wind Farm Ltd.)	CZ1	Garrow	110	-5.50%	-5.70%	-5.60%	-5.90%	-4.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	-5.60%	0.996	0.946	-5.00%
Cronleas Upper Windfarm Phase 2 (Bearne Gaofhige Powe Supply)	CE2	Carlow	110																							1.013		
Curabane Wind Farm (Galeforce Energy Ltd.)	CB1	Dunmanway	110		</																							

Appendix D: Generation & Load Data

In order to provide transparency to market participants the generation and load data used in the derivation of the draft 2010 TLAFs, as provided by the System Operators, is published as a separate Excel spreadsheet file in conjunction with this consultation paper.