Enduring Connection Policy 2.4

Solar and Wind Constraints Report: Results for Area G

Version 1.0

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Revision History						
Revision	**Date**	**Description**	**Originator**	**Reviewer**	**Checker**	**Approver**

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Document Structure

This document is for customers wishing to see the estimated Total Dispatch Down for Area G. For information on the study assumptions, methodology, abbreviations and terms used for the Constraint Analysis reports, please see the area non-specific Assumptions and Methodology report found on the ECP-2.4 webpage[1].

This document contains two main sections:

Section 1: Results for Area G: outlines the area covered by this report. This section provides a network diagram of Area G and an overview of the results for Area G.

Section 2: Area G Node Results: provides a table of results for every node in the area. This table documents the installed capacity, available energy, surplus, curtailment and constraint for every node in Area G.

[1] https://www.eirgrid.ie/industry/customer-information/ecp-constraint-forecast-reports#ecp-2.4-constraint-reports-for-solar-and-wind

Important Note

This ECP-2.4 constraints report presents an estimate of the reduction in available solar and wind generation based on the study assumptions described. The reduction in available generation has been split into three categories for the purposes of this study: surplus, curtailment, and constraint.

Following the Judicial decision on the SEM-22-009 Decision Paper on Dispatch, Redispatch and Compensation Pursuant to Regulation EU 2019/943, the detailed design for implementing Articles 12 and 13 is yet to be determined and may differ from the implementation for Total Dispatch Down used in this study. Therefore, an assumed interpretation will be used for ECP-2.4 Constraint Analysis that applies a grandfathering[2] approach to resolving Surplus and Constraint conditions. However, in addition to the Core ECP 2.4 constraint forecast studies a set of sensitivity studies are also included in the study scenarios which employs pro-rata allocation of constraints.

This report uses the term "Total Dispatch Down" to refer to the total reduction in available solar and wind generation i.e., the sum of surplus, curtailment, and constraint, and is considered the key indicator for the results. However, it is important to note that the term "dispatch down" is more correctly applicable only to TSO instructions to reduce generation output from a market position, as is the case for curtailment and constraint, and is not necessarily applicable to a generator reducing its own output from its availability to a market position so that supply and demand are balanced, as is the case for surplus.

The results presented in this report are based on the simulation and modelling assumptions described. The findings are indicative only and this report should in no way be read as a guarantee as to future levels of surplus, curtailment, and constraint. The modelling of interconnectors is kept consistent with ECP 2.3 constraint forecast.

The battery sensitivity is termed as "ECP Battery", in which the non-connected batteries from the ECP scenario has been removed.

[2] 'Grandfathering' is where an old rule continues to apply to some existing situations while a new rule will apply to future cases. In the context of Article 12 and Article 13, grandfathering refers to the distinction between how priority dispatch renewable generators (those installed prior to 4th July 2019) and non-priority dispatch renewable generators (those installed on and after 4th July 2019) are treated in the SEM.

1 Results for Area G

1.1 Introduction

This section provides the surplus, curtailment and constraint results for Area G that are estimated by this analysis. There is a total of six core ECP-2.4 studies and nine sensitivity studies (including without maintenance) presented in this report. The study scenarios and the associated assumptions can be found in the Assumptions and Methodology report. An overview and discussion of the results is provided in this Section. The surplus, curtailment, and constraint results for each node in Area G are provided in Section 2 of this report.

1.2 Study Notes

A list of the major study assumptions is provided in the Assumptions and Methodology report. For Area G, there are a number of key assumptions which drive the results, including network outages and capacity factors. These are thus reiterated here. Similarly, it is worth highlighting again the differences between the various components of Total Dispatch Down.

1.2.1 Network Outages

The scenarios in this report are intended to give a view of average long-term levels of surplus, curtailment, and constraint, subject to installed generation, demand, interconnection, operational constraints, and reinforcement delivery.

The ECP-2.4 constraints forecast analysis applies a similar transmission outage schedule to the ECP-2.3 constraints analysis. This was kept consistent with last year's schedule following positive feedback from industry. This schedule allows a representation of outage impact in each geographical area to be included in the studies.

This representative transmission outage schedule is given in Appendix A of the Assumptions and Methodology report. However, at times, longer duration outages may be required for certain connections, reinforcement works or forced outages work. These are not considered in this analysis and may result in higher wind and solar constraints in reality.

1.2.2 Benefit of Capacity Factor

In practice, a specific windfarm may be located at a site with higher wind speeds or may have a better performing type of wind turbine; the result is a higher capacity factor than neighbouring windfarms. This report does not reflect such localised diversity between windfarm sites. In reality, a windfarm with a higher capacity factor may see lower percentage surplus, curtailment, or constraint levels than an adjacent windfarm with a lower capacity factor. This is because at times of medium or low wind speed, the high-capacity factor windfarm can generate power when the low-capacity factor windfarm cannot.

1.2.3 Notes on Surplus, Curtailment and Constraint Modelling

1.2.3.1 Surplus

During generation reduction for surplus, a distinction is made between the treatment of priority and non-priority renewable generators, with non-priority generators being dispatched down ahead of priority generators. Within these two categories of generation, surplus is applied pro-rata across the all-island system for all non-priority renewable generators.

For any hour of the study, the surplus level will depend on system demand and interconnector flow capacity. In general, surplus is expected to increase with increasing installed renewable capacity.

It is expected that the further interconnection of the all-Island network with mainland UK and Europe will decrease the frequency of surplus conditions occurring.

In general, increased interconnector capacity with mainland UK may not necessarily eliminate surplus generation as solar and wind profiles in mainland UK will largely be in line with those in Ireland. In the Future Grid study year however, when both the Celtic and 2nd Ireland-France interconnectors are connected, there will be a greater export capacity during times of abundant renewable generation to mainland Europe where similar wind and solar generation in Ireland and mainland Europe is not expected.

Therefore, dispatch down due to surplus generation may not occur as frequently once both the Celtic and 2nd Ireland-France interconnectors are connected.

1.2.3.2 Curtailment

In this report, for each hour of the study, the curtailment is shared pro-rata on a system-wide basis with no distinction made between priority and non-priority generators. This means that both curtailment reductions and curtailment increases are shared system wide.

Solar generation has different reported levels of curtailment compared to wind due to different capacity factors and annual profile shapes.

The applied curtailment is broadly constant across the system. However, due to differences in wind and solar profiles and capacity factors between areas, the percentage of average curtailment differs between areas.

1.2.3.3 Constraints

The constraints on the renewable generation are treated differently in different years. In 2029 and Future Grid scenario, for the constraint of renewable generation, a distinction is made between priority and non-priority generators, with non-priority generators being dispatched down ahead of priority generators across the relevant transmission nodes within the subgroup. Such application is termed as grandfathering of constraints. However, in 2027 study the constraints are allocated pro-rata to all renewable generator nodes within the subgroup. Additionally, in relevant sensitivity scenarios, grandfathering or pro-rata constraints allocation are applied accordingly. More details on the approach assumed in this study for the application of constraints to renewable generation can be found in the main ECP 2.4 Assumptions and Methodology report.

In general, there is a tendency for renewable bulk power to flow towards the demand in Dublin and the interconnectors. These flow patterns are relevant when seeking to understand constraint apportionment in the simulation.

When presented as percentage values, the constraint results look different for solar and wind, as they have a low correlation due to different profile shapes driven by weather patterns.

1.3 Generation Overview

A detailed system-level overview of the renewable generation scenarios used in these studies is given in Section 2 of the area non-specific Assumptions and Methodology report. The distribution of generation in each scenario based on technology, area and node is given in Appendix B of the Assumptions and Methodology report. The node-level installed wind and solar generation for Area G in the "ECP" scenario is given in Table 1-1.

Node	SO	Status	Solar	Wind
Balruntagh	TSO	due to connect	115	
Baltrasna	DSO	connected	17	
Drybridge	DSO	connected	4	
Drybridge	DSO	due to connect	9	
Drybridge	DSO	connected		6
Dundalk	DSO	due to connect	50	
Dundalk	DSO	connected		16
Garballagh	TSO	connected	95	
Garballagh	TSO	due to connect	48	
Gaskinstown	TSO	due to connect	85	
Gorman	TSO	due to connect	46	
Lisdrum	DSO	due to connect		33
Lislea	TSO	connected		49
Louth	TSO	due to connect	246	
Meath Hill	DSO	due to connect		
Meath Hill	DSO	connected		35
Meath Hill	DSO	connected		16
Meath Hill	DSO	connected		18
Navan	DSO	due to connect	21	
Oriel 220Kv	TSO	due to connect		160
Oriel 220Kv	TSO	due to connect		210
Paddock	TSO	due to connect	397	
Ratrussan	TSO	connected		79
Ricetown	TSO	due to connect	63	
Shankill	DSO	due to connect	19	
Shankill	DSO	connected		22
Shankill	DSO	connected		6
Total			1215	650

Table 1-1 Wind and Solar Generation Summary (MW) in Area G for Generation Scenario "ECP"

Table 1-2 and Table 1-3 show installed solar and wind generation for Ireland and Area G, and the available solar and wind generation for Area G for each generation scenario.

Solar	ECP	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Ireland (MW)	7005	7005	7005	7005
Installed Area G (MW)	1216	1216	1216	1216
Installed Controllable Area G (MW)	1216	1216	1216	1216
Available Controllable Area G (GWh)	1558	1558	1558	1558

Table 1-2 - Installed MW and Available GWh for Area G - Solar

Wind	ECP	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Ireland (MW)	7358	10432	12358	12358
Installed Area G (MW)	279	279	649	649
Installed Controllable Area G (MW)	250	250	620	620
Available Controllable Area G (GWh)	780	780	2330	2330

Table 1-3 - Installed MW and Available GWh for Area G - Wind

1.4 Network Overview

Area G, in the east of the country, includes a mix of wind and solar generation. A summary of this generation is given in Table 1.1.

The transmission network in Area G and the surrounding areas is shown in Figure 1-1. The 400 kV circuits are shown in red, the 220 kV circuits in green and the 110 kV circuits in black. The area is connected to Northern Ireland through the North South Interconnector. Possible future transmission stations and lines for the connection of new generation are also shown on the map below.

Figure 1-1 Network Map for Area G

Area G is well connected to Area J which has Ireland's largest load centres. This includes the majority of Large Energy Users (LEU) demand that has been assumed for the study. The EWIC interconnector is also located in Area J which can potentially export when renewable generation is high.

In general, when renewable generation is high, power flows are predominantly from Area A and B towards Area G which then flows towards Area J to supply the demand and the EWIC flow. A transmission bottleneck between Area G and Area J is shared with power flows coming from other areas.

Constraints in Area G can be caused both by local and wider system issues. Constraints in the model are optimised on a system-wide basis so, in theory, an increase in the installed generation in another area can increase constraints in Area G.

1.5 Future Grid Sensitivity Scenario

In line with the previous ECP constraint forecasts, and in response to feedback from industry, the Future Grid scenario is included in the analysis. All reasonable efforts have been made to align the network assumptions in the Future Grid scenario to the Shaping Our Electricity Future (SOEF) 1.1 Roadmap. The network projects included in the study are given in Appendix A of the Assumptions and Methodology report found on the ECP-2.4 webpage. Additionally, any project that has progressed to stage three of the six stage project planning process after the publication of the SOEF 1.1 Roadmap are also included in the Future Grid

studies. Note however, that the wind and solar generation portfolio in the ECP-2.4 Future Grid scenario differs from the wind and solar portfolio considered in the SOEF 1.1 Roadmap. This is done to maintain alignment with the ECP-2.4 process. The ECP study scenario includes all wind and solar projects which have applied through connection processes, whereas the SOEF 1.1 study includes prospective list of generators to achieve the capacity volumes stated in the Climate Action Plan 23.

The Future Grid study includes a base renewable generation scenario (ECP), along with four sensitivity generation scenarios (ECP + 3.1 GW offshore, ECP + 5 GW offshore, ECP + 5 GW offshore without LirIC and 2nd France IC, and a maintenance sensitivity study). The scenarios with additional offshore wind have been included to show the potential impact of increasing offshore wind on Total Dispatch Down levels.

The demand modelled for the Future Grid scenario is based on the medium demand scenario for 2030 as published in the All-Island Resource Adequacy Assessment 2025-2034.

The purpose of the Future Grid scenario is to provide insights on the potential impact of the SOEF 1.1 Roadmap network reinforcement portfolio on the dispatch down of wind and solar generators. This study is not intended to be exhaustive; it is not intended to remove all transmission constraints and it does not give individual generators guarantee that their Total Dispatch Down will change to the estimated levels.

1.6 Area G – Average Results

The Total Dispatch Down results for Area G are provided below in Table 1-5 to Table 1-12 and Figure 1-3 to Figure 1-6. These include the breakdown between surplus, curtailment, and constraint. The Table 1-6, Table 1-8, Table 1-10 and Table 1-12 gives the results of constraint sensitivity scenario. The Total Dispatch Down percentages are based on the total available energy. The Total Dispatch Down is the sum of surplus, curtailment, and constraint. The node level breakdown of surplus, curtailment and constraint are given in Section 2. The results show that the system level Total Dispatch Down increases with additional installed capacity due to a significant increase in surplus. However, the Total Dispatch Down reduces when the 2029 studies are compared with 2027 and there is a further reduction in the Future Grid scenario owing to increased demand, network reinforcement, interconnection, and relaxed system level operational limits.

For each generation type in Area G (solar non-priority, wind non-priority and wind priority), the total installed capacity in MW and total available generation in GWh are given in Table 1-5, to Table 1-12. The total generation in GWh after dispatch down and the corresponding percentage Total Dispatch Down are also included in the tables for each scenario. Details on the generation and network scenarios are given in Section 2 of the Assumptions and Methodology report.

1.6.1 Offshore Wind Sensitivity Studies

Results for the offshore wind-based sensitivity studies are included, along with results for the core scenarios. The general trend is that with increasing levels of offshore wind, Total Dispatch Down increases due to significant increases in the available wind energy, which in turn leads to increased levels of surplus.

1.6.2 Impact of Article 12 and 13

Higher Total Dispatch Down is observed for non-priority generators due to the impact of the implementation of grandfathering of surplus and constraints, which results in non-priority generators being reduced ahead of priority generators for surplus and constraint reasons. More detail on the Article 12 clause is available in Section 3.6 of the Assumptions and Methodology report.

Another factor that contributes to the higher total dispatch down for non-priority wind and solar units is the proportion of priority to non-priority units within a subgroup. If a subgroup has a high volume of priority wind/solar units to non-priority wind/solar units, then this can result in the constraints that would usually be allocated to the priority units only allocated to the non-priority units (due to the grandfathering of constraints). This can result in high constraints percentage for non-priority units within a subgroup.

1.6.3 Battery Sensitivity

The ECP 2.4 constraint forecast study scenarios include a battery sensitivity study. The installed capacity of wind and solar is same as that of ECP scenario while the network and demand are of 2029 study year. The constraint allocation is based on grandfathering. The results show a higher level of Total Dispatch Down especially contributed by the surplus component. During higher RES conditions, with the batteries included, the excess energy available are stored and utilized during low RES available. A detailed breakdown of the Total Dispatch Down components with batteries are given in the section 2 of this report.

1.6.4 Future Grid Sensitivity Study

The results of the Future Grid scenario show a notable reduction in Total Dispatch Down over the core study years (2027 and 2029) due to the impact of the SOEF 1.1 Roadmap network reinforcements, increased demand levels, increased interconnection, and the relaxation of operational constraints. However, increases in installed wind and solar generation, as seen in the offshore wind scenarios, result in rising surplus levels, causing an increase in Total Dispatch Down levels. A detailed breakdown of the Total Dispatch Down components for Area G under the Future Grid scenarios and associated sensitivity case is given in Table 1-5 to Table 1-12. Further node level details can be viewed in Section 2.

1.6.5 Area Subgroups

The constraint forecast study, which is performed using PLEXOS software, applies mathematical optimisation to find the lowest cost generator dispatch schedule to meet demand, subject to a number of system and transmission level constraints. To ensure the model is impartial, the assumptions on the cost of renewable generators remain the same, irrespective of technology or location, and are always lower than that of conventional plants. This ensures renewable generators are given priority in the PLEXOS optimisation. However, due to network congestion caused by line limits and N-1 contingency security checks, the power flows in certain lines are limited, causing dispatch down in RES generators which may affect one generator or multiple generators chosen by PLEXOS' internal logic. During various initial studies, it was observed that PLEXOS may repeatedly choose the same generator(s) to dispatch down to manage an issue in a region shared by multiple generators.

There is often a post-processing step between the PLEXOS simulation and this report to ensure an appropriate allocation of constraints among generators sharing the bottlenecks. This is done by creating constraint subgroups within an area or spanning multiple different areas. The subgroups are selected based on an assessment of the raw PLEXOS results and based on TSO experience of dispatch down on the real system. The subgroups are chosen to group those generators into a constraint group that are expected to experience similar constraint levels. The subgroups are selected on the basis that they share a common transmission bottleneck, or they are electrically close to a congested area within the network.

In Area G, any loss of the 220 kV circuits will put additional stress on the supporting 110 kV circuits, causing dispatch down of RES generators in the area. The 110 kV parallel paths are critical transmission infrastructure in these areas during times of high wind. Any loss of these 110 kV parallel lines results in additional dispatch down. The contingencies and overloaded lines associated with the area are included in Appendix C of the ECP-2.4 Assumptions and Methodology report. Additionally, the loss of a 220 kV or 400 kV circuit applies additional stress on the 110 kV circuits in the region. During the high-RES scenarios, the power from Areas A, B and C also flow onto the 220 kV circuits, and then towards the load centres in Dublin. Loss of 220 kV lines connecting the Gorman, Louth and Woodland stations can cause congestion in 110 kV parallel lines around Drybridge. Hence a bottleneck is created around the Gorman – Drybridge region and forms a G North subgroup. Additionally, the contingency on the line Ratrussan to Louth creates overload on the line Lisdrum Louth in this region. However, the area G gets additional reinforcements by the study year 2029. Yet, additional power flow from other areas towards Area G creates increase in contingency binding in Area G for the Future Grid scenario.

Also, the loss of the new North South 2 interconnector can also increase congestion in the region.

The G South region is affected by the loss of north Dublin 220 kV circuits and parallel 110 kV circuits from Drybridge to Corduff or Finglas. Hence, the south part of Area G is grouped together with Area J City to form the J City, G South Subgroup.

The subgroup nodes for Area G are given in Table 1-4. The individual node level dispatch down is given in Section 2.

Subgroup	Nodes
G North	Balruntagh
	Dundalk
	Lisdrum
	Lislea
	Louth
	Meath Hill
	Navan
	Oriel 220 kV
	Ratrussan
	Ricetown
	Shankill
J City, G South	Baltrasna
	Drybridge
	Garballagh
	Gaskinstown
	Gorman
	Paddock

Table 1-4 Area G generator nodes and their subgroups

Figure 1-2 Subgroups G North and J City & G South (subgroups outlined by blue dashed line)

The solar non-priority data is given in the following table.

Area G (J City, G South)	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	205	453	701				
Installed Capacity (MW)	2029	205	453	701	701			
Installed Capacity (MW)	FG			701		701	701	701
Available Energy (GWh)	2027	263	581	898				
Available Energy (GWh)	2029	263	581	898	898			
Available Energy (GWh)	FG			898		898	898	898
Generation (GWh)	2027	231	494	699				
Generation (GWh)	2029	241	527	767	684			
Generation (GWh)	FG			797		770	728	671
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	11 %	7 %	4 %				
Constraint (%)	2029	8 %	4 %	3 %	4 %			
Constraint (%)	FG			5 %		2 %	2 %	2 %
Total Dispatch Down (%)	2027	12 %	15 %	22 %				
Total Dispatch Down (%)	2029	8 %	9 %	15 %	24 %			
Total Dispatch Down (%)	FG			11 %		14 %	19 %	25 %

Table 1-5 - Surplus, Curtailment and Constraint for Solar Non-priority in Area G (J City, G South)

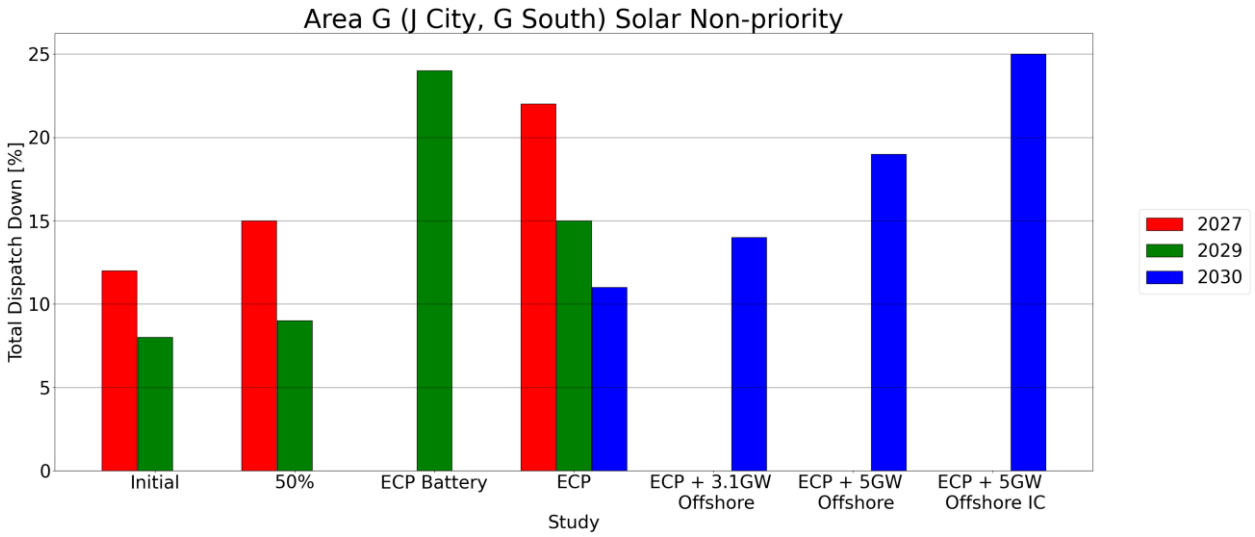

Figure 1-3 - Results Solar Non-priority Area G (J City, G South)

Area G (J City, G South)	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	453	
Installed Capacity (MW)	2029 (pro-rata)	453	
Installed Capacity (MW)	FG (pro-rata)		701
Available Energy (GWh)	2027 (GF)	581	
Available Energy (GWh)	2029 (pro-rata)	581	
Available Energy (GWh)	FG (pro-rata)		898
Generation (GWh)	2027 (GF)	494	
Generation (GWh)	2029 (pro-rata)	527	
Generation (GWh)	FG (pro-rata)		770
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	7 %	
Constraint (%)	2029 (pro-rata)	4 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	9 %	
Total Dispatch Down (%)	FG (pro-rata)		14 %

Table 1-6 -Surplus, Curtailment and Constraint for Solar Non-priority with Sensitivity in Area G (J City, G South)

The solar non-priority data is given in the following table.

Area G (G North)	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	15	265	515				
Installed Capacity (MW)	2029	15	265	515	515			
Installed Capacity (MW)	FG			515		515	515	515
Available Energy (GWh)	2027	19	340	660				
Available Energy (GWh)	2029	19	340	660	660			
Available Energy (GWh)	FG			660		660	660	660
Generation (GWh)	2027	19	302	518				
Generation (GWh)	2029	19	321	577	518			
Generation (GWh)	FG			598		576	545	503
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	1 %	3 %	3 %				
Constraint (%)	2029	1 %	1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	2 %	11 %	21 %				
Total Dispatch Down (%)	2029	1 %	6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 1-7 - Surplus, Curtailment and Constraint for Solar Non-priority in Area G (G North)

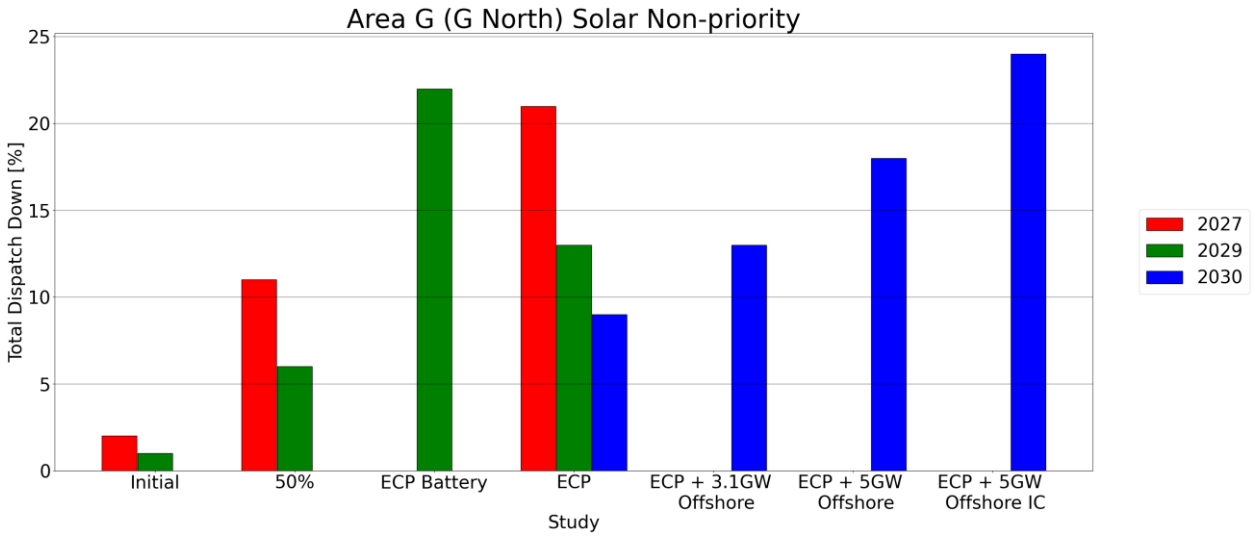

Figure 1-4 - Results Solar Non-priority Area G (G North)

Area G (G North)	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	265	
Installed Capacity (MW)	2029 (pro-rata)	265	
Installed Capacity (MW)	FG (pro-rata)		515
Available Energy (GWh)	2027 (GF)	340	
Available Energy (GWh)	2029 (pro-rata)	340	
Available Energy (GWh)	FG (pro-rata)		660
Generation (GWh)	2027 (GF)	302	
Generation (GWh)	2029 (pro-rata)	321	
Generation (GWh)	FG (pro-rata)		576
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 1-8 -Surplus, Curtailment and Constraint for Solar Non-priority with Sensitivity in Area G (G North)

The wind non-priority data is given in the following table.

Area G (G North)	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	116	116	116				
Installed Capacity (MW)	2029	116	116	116	116			
Installed Capacity (MW)	FG			116		116	486	486
Available Energy (GWh)	2027	364	364	364				
Available Energy (GWh)	2029	364	364	364	364			
Available Energy (GWh)	FG			364		364	1914	1914
Generation (GWh)	2027	347	297	263				
Generation (GWh)	2029	345	315	295	192			
Generation (GWh)	FG			174		295	1441	1284
Surplus (%)	2027	1 %	6 %	13 %				
Surplus (%)	2029	0 %	2 %	6 %	9 %			
Surplus (%)	FG			3 %		13 %	22 %	31 %
Curtailment (%)	2027	2 %	3 %	4 %				
Curtailment (%)	2029	0 %	1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	5 %	10 %	11 %	35 %			
Constraint (%)	FG			49 %		4 %	1 %	0 %
Total Dispatch Down (%)	2027	5 %	18 %	28 %				
Total Dispatch Down (%)	2029	5 %	14 %	19 %	47 %			
Total Dispatch Down (%)	FG			52 %		19 %	26 %	34 %

Table 1-9 - Surplus, Curtailment and Constraint for Wind Non-priority in Area G (G North)

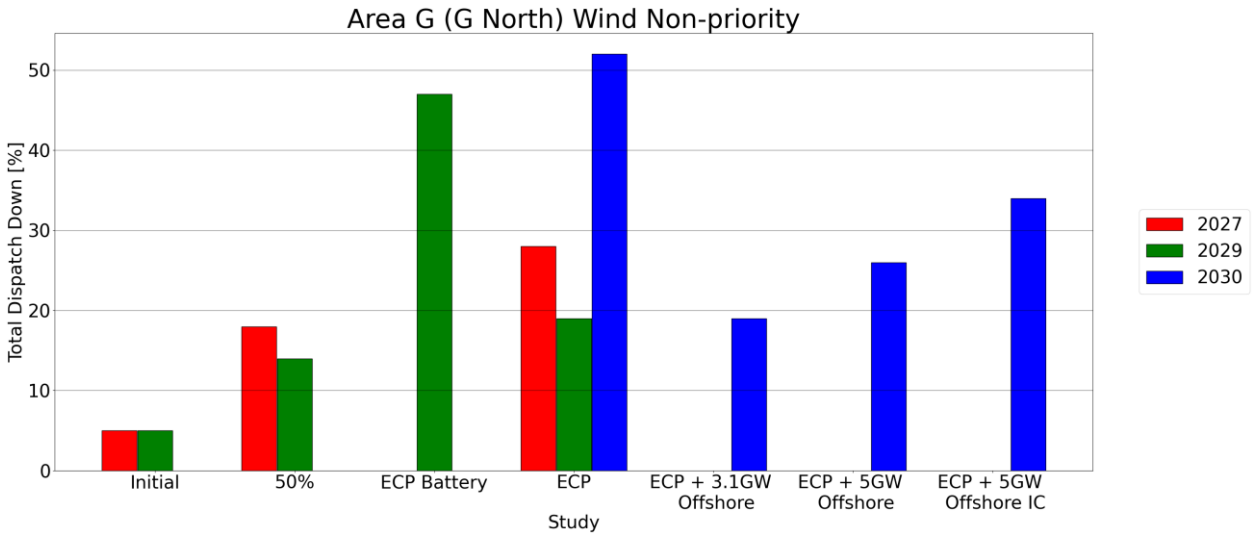

Figure 1-5 - Results Wind Non-priority Area G (G North)

Area G (G North)	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	116	
Installed Capacity (MW)	2029 (pro-rata)	116	
Installed Capacity (MW)	FG (pro-rata)		116
Available Energy (GWh)	2027 (GF)	364	
Available Energy (GWh)	2029 (pro-rata)	364	
Available Energy (GWh)	FG (pro-rata)		364
Generation (GWh)	2027 (GF)	261	
Generation (GWh)	2029 (pro-rata)	334	
Generation (GWh)	FG (pro-rata)		303
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		13 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	19 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	28 %	
Total Dispatch Down (%)	2029 (pro-rata)	8 %	
Total Dispatch Down (%)	FG (pro-rata)		17 %

Table 1-10 -Surplus, Curtailment and Constraint for Wind Non-priority with Sensitivity in Area G (G North)

The wind priority data is given in the following table.

Area G (G North)	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	133	133	133				
Installed Capacity (MW)	2029	133	133	133	133			
Installed Capacity (MW)	FG			133		133	133	133
Available Energy (GWh)	2027	416	416	416				
Available Energy (GWh)	2029	416	416	416	416			
Available Energy (GWh)	FG			416		416	416	416
Generation (GWh)	2027	401	361	346				
Generation (GWh)	2029	415	410	403	398			
Generation (GWh)	FG			413		405	401	397
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	7 %				
Curtailment (%)	2029	0 %	2 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	4 %	13 %	17 %				
Total Dispatch Down (%)	2029	0 %	2 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 1-11 - Surplus, Curtailment and Constraint for Wind Priority in Area G (G North)

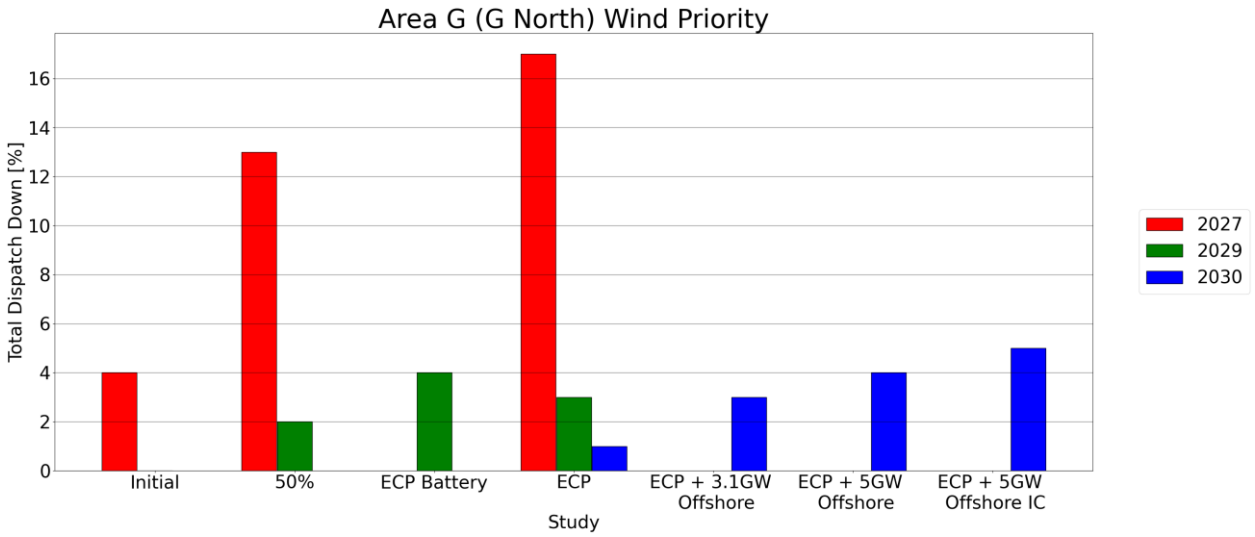

Figure 1-6 - Results Wind Priority Area G (G North)

Area G (G North)	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	133	
Installed Capacity (MW)	2029 (pro-rata)	133	
Installed Capacity (MW)	FG (pro-rata)		133
Available Energy (GWh)	2027 (GF)	416	
Available Energy (GWh)	2029 (pro-rata)	416	
Available Energy (GWh)	FG (pro-rata)		416
Generation (GWh)	2027 (GF)	399	
Generation (GWh)	2029 (pro-rata)	389	
Generation (GWh)	FG (pro-rata)		396
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		5 %

Table 1-12 -Surplus, Curtailment and Constraint for Wind Priority with Sensitivity in Area G (G North)

1.7 Conclusion – Results for Area G

This section provides an overview of the estimated surplus, curtailment and constraint values for Area G for a range of scenarios based on a number of installed generation assumptions (generation scenarios) and the study year (network and demand assumptions). The results highly depend on the study assumptions, which are described in the Assumptions and Methodology report.

Section 2 contains the detailed results consisting of available energy (GWh) and percentage surplus, curtailment, and constraint values for each node for both solar and wind in Area G.

2 Area G Node Results

This section presents the results of the modelling analysis for Area G. The levels of surplus, curtailment and constraint that controllable solar and wind generators in Area G might expect to experience are reported on a nodal basis for the study scenarios. Details on the generation capacity at each node are also provided along with the assumed amount of controllable generation.

This section also presents a list of the generators at each node that are included in the study.

Figure 2-1 Area G

2.1 Balruntagh

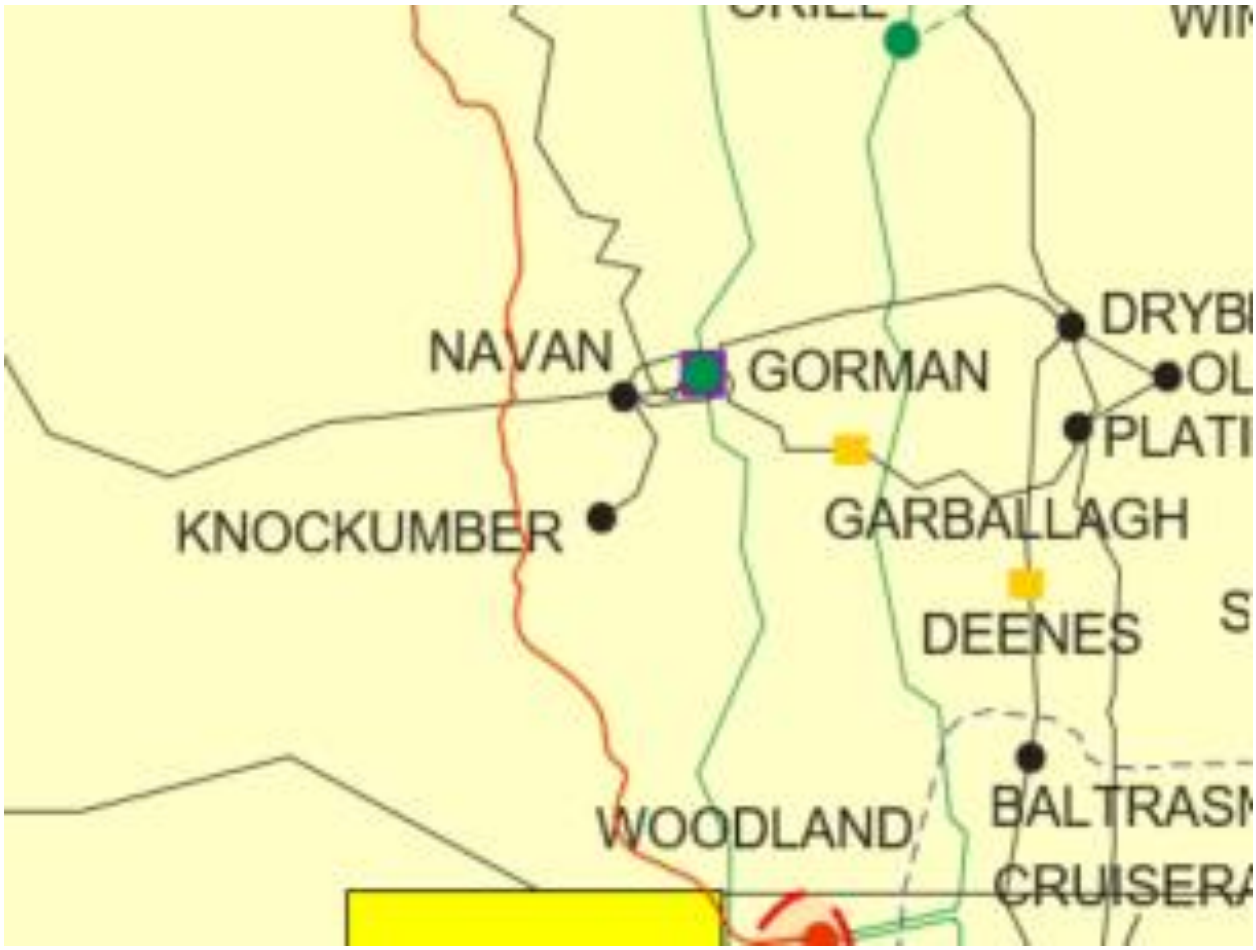

Figure 2-2 - Location of node Balruntagh

Generator	SO	Capacity	Type	Status
Milltown Solar	TSO	115.0	solar not priority	due to connect

Table 2-1 - Generation Included in Study for Node Balruntagh

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		58	115				
Installed Capacity (MW)	2029		58	115	115			
Installed Capacity (MW)	FG			115		115	115	115
Available Energy (GWh)	2027		74	147				
Available Energy (GWh)	2029		74	147	147			
Available Energy (GWh)	FG			147		147	147	147
Generation (GWh)	2027		66	116				
Generation (GWh)	2029		70	129	116			
Generation (GWh)	FG			133		129	122	112
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027		11 %	21 %				
Total Dispatch Down (%)	2029		6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 2-2 - Surplus, Curtailment and Constraint for Solar non-priority for Node Balruntagh

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	58	
Installed Capacity (MW)	2029 (pro-rata)	58	
Installed Capacity (MW)	FG (pro-rata)		115
Available Energy (GWh)	2027 (GF)	74	
Available Energy (GWh)	2029 (pro-rata)	74	
Available Energy (GWh)	FG (pro-rata)		147
Generation (GWh)	2027 (GF)	66	
Generation (GWh)	2029 (pro-rata)	70	
Generation (GWh)	FG (pro-rata)		129
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 2-3 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Balruntagh

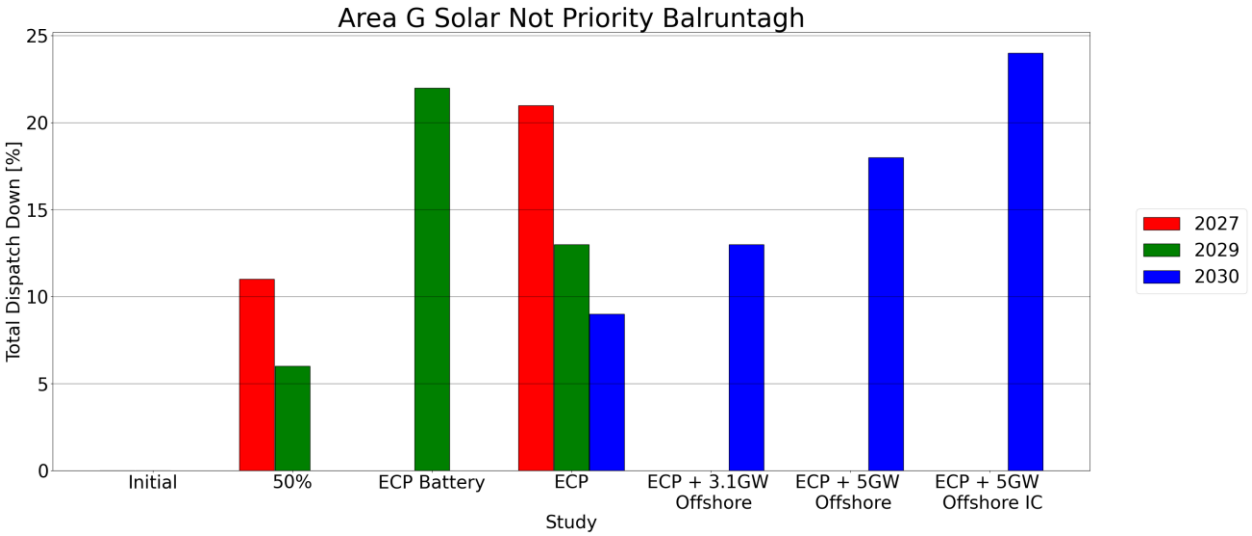

Figure 2-3 - Total Dispatch Down for Solar not priority for Node Balruntagh

2.2 Baltrasna

Figure 2-4 - Location of node Baltrasna

Generator	SO	Capacity	Type	Status
Hilltown PV	DSO	10.0	solar not priority	connected
Painestown Hill Solar Farm	DSO	7.14	solar not priority	connected

Table 2-4 - Generation Included in Study for Node Baltrasna

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	17	17	17				
Installed Capacity (MW)	2029	17	17	17	17			
Installed Capacity (MW)	FG			17		17	17	17
Available Energy (GWh)	2027	22	22	22				
Available Energy (GWh)	2029	22	22	22	22			
Available Energy (GWh)	FG			22		22	22	22
Generation (GWh)	2027	19	19	17				
Generation (GWh)	2029	20	20	19	17			
Generation (GWh)	FG			19		19	18	16
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	11 %	7 %	4 %				
Constraint (%)	2029	8 %	4 %	3 %	4 %			
Constraint (%)	FG			5 %		2 %	2 %	2 %
Total Dispatch Down (%)	2027	12 %	15 %	22 %				
Total Dispatch Down (%)	2029	8 %	9 %	15 %	24 %			
Total Dispatch Down (%)	FG			11 %		14 %	19 %	25 %

Table 2-5 - Surplus, Curtailment and Constraint for Solar non-priority for Node Baltrasna

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	17	
Installed Capacity (MW)	2029 (pro-rata)	17	
Installed Capacity (MW)	FG (pro-rata)		17
Available Energy (GWh)	2027 (GF)	22	
Available Energy (GWh)	2029 (pro-rata)	22	
Available Energy (GWh)	FG (pro-rata)		22
Generation (GWh)	2027 (GF)	19	
Generation (GWh)	2029 (pro-rata)	20	
Generation (GWh)	FG (pro-rata)		19
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	7 %	
Constraint (%)	2029 (pro-rata)	4 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	9 %	
Total Dispatch Down (%)	FG (pro-rata)		14 %

Table 2-6 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Baltrasna

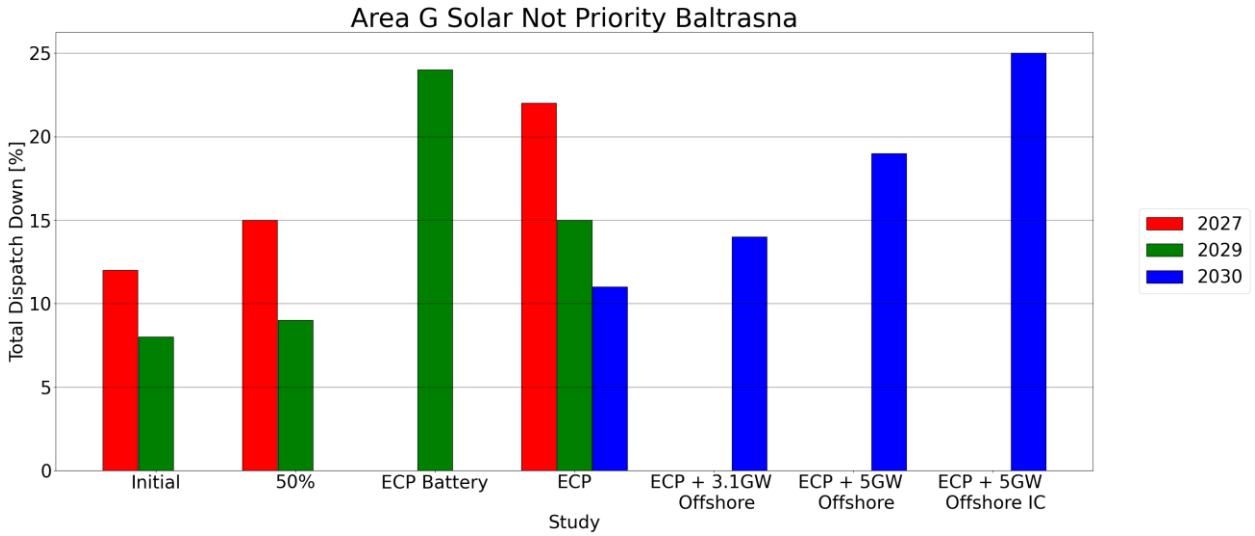

Figure 2-5 - Total Dispatch Down for Solar not priority for Node Baltrasna

2.3 Drybridge

Figure 2-6 - Location of node Drybridge

Generator	SO	Capacity	Type	Status
Dunmore (1)	DSO	1.7	wind uncontrolled	connected
Dunmore (2)	DSO	1.8	wind uncontrolled	connected
Collon Wind Power	DSO	2.3	wind uncontrolled	connected
Beaulieu PV	DSO	3.99	solar not priority	connected
Grangegeeth Solar	DSO	4.0	solar not priority	due to connect
Cluide Solar	DSO	4.0	solar not priority	due to connect
Mullagharoy Solar Farm	DSO	0.99	solar not priority	due to connect

Table 2-7 - Generation Included in Study for Node Drybridge

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	8	10	13				
Installed Capacity (MW)	2029	8	10	13	13			
Installed Capacity (MW)	FG			13		13	13	13
Available Energy (GWh)	2027	10	13	17				
Available Energy (GWh)	2029	10	13	17	17			
Available Energy (GWh)	FG			17		17	17	17
Generation (GWh)	2027	9	11	13				
Generation (GWh)	2029	9	12	14	13			
Generation (GWh)	FG			15		14	13	12
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	11 %	7 %	4 %				
Constraint (%)	2029	8 %	4 %	3 %	4 %			
Constraint (%)	FG			5 %		2 %	2 %	2 %
Total Dispatch Down (%)	2027	12 %	15 %	22 %				
Total Dispatch Down (%)	2029	8 %	9 %	15 %	24 %			
Total Dispatch Down (%)	FG			11 %		14 %	19 %	25 %

Table 2-8 - Surplus, Curtailment and Constraint for Solar non-priority for Node Drybridge

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	10	
Installed Capacity (MW)	2029 (pro-rata)	10	
Installed Capacity (MW)	FG (pro-rata)		13
Available Energy (GWh)	2027 (GF)	13	
Available Energy (GWh)	2029 (pro-rata)	13	
Available Energy (GWh)	FG (pro-rata)		17
Generation (GWh)	2027 (GF)	11	
Generation (GWh)	2029 (pro-rata)	12	
Generation (GWh)	FG (pro-rata)		14
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	7 %	
Constraint (%)	2029 (pro-rata)	4 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	9 %	
Total Dispatch Down (%)	FG (pro-rata)		14 %

Table 2-9 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Drybridge

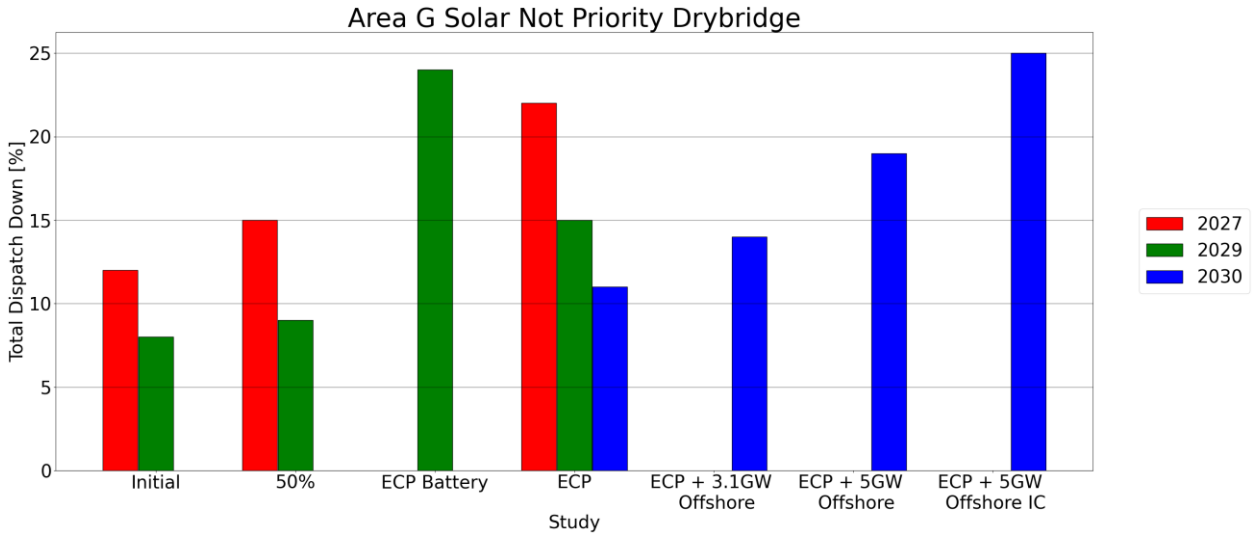

Figure 2-7 - Total Dispatch Down for Solar not priority for Node Drybridge

2.4 Dundalk

Figure 2-8 - Location of node Dundalk

Generator	SO	Capacity	Type	Status
Grove Hill (1) formerly Tullynageer	DSO	16.1	wind priority	connected
Willville Solar Park	DSO	3.99	solar not priority	due to connect
Willville Extension Solar Park	DSO	1.0	solar not priority	due to connect
Kilcurly Solar	DSO	44.9	solar not priority	due to connect

Table 2-10 - Generation Included in Study for Node Dundalk

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		25	50				
Installed Capacity (MW)	2029		25	50	50			
Installed Capacity (MW)	FG			50		50	50	50
Available Energy (GWh)	2027		32	64				
Available Energy (GWh)	2029		32	64	64			
Available Energy (GWh)	FG			64		64	64	64
Generation (GWh)	2027		28	50				
Generation (GWh)	2029		30	56	50			
Generation (GWh)	FG			58		56	53	49
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027		11 %	21 %				
Total Dispatch Down (%)	2029		6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 2-11 - Surplus, Curtailment and Constraint for Solar non-priority for Node Dundalk

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	25	
Installed Capacity (MW)	2029 (pro-rata)	25	
Installed Capacity (MW)	FG (pro-rata)		50
Available Energy (GWh)	2027 (GF)	32	
Available Energy (GWh)	2029 (pro-rata)	32	
Available Energy (GWh)	FG (pro-rata)		64
Generation (GWh)	2027 (GF)	28	
Generation (GWh)	2029 (pro-rata)	30	
Generation (GWh)	FG (pro-rata)		56
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 2-12 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Dundalk

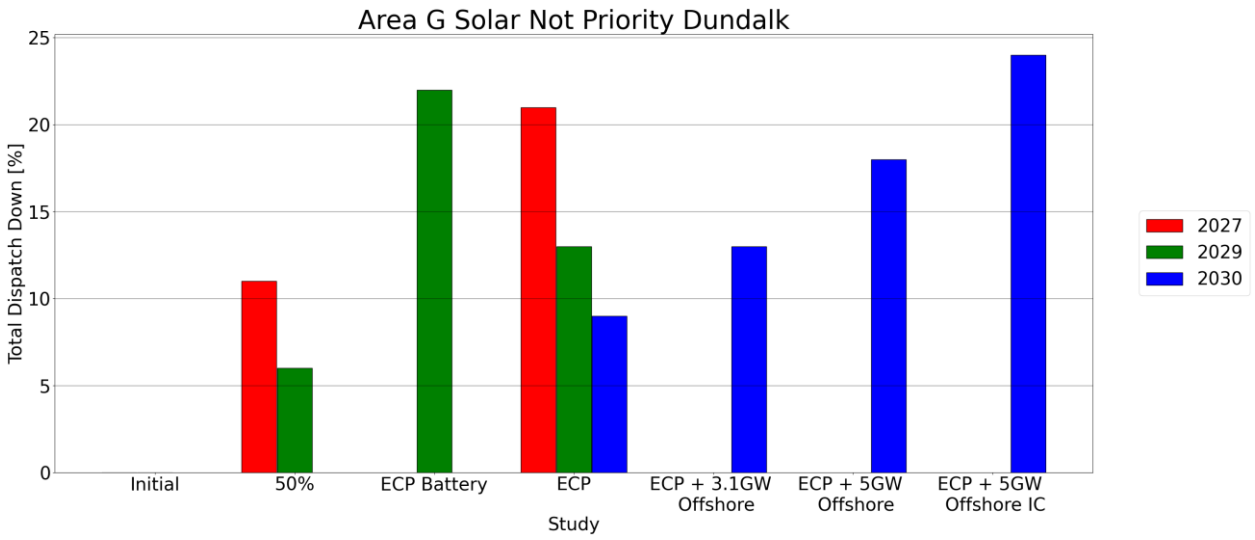

Figure 2-9 - Total Dispatch Down for Solar not priority for Node Dundalk

The wind priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	16	16	16				
Installed Capacity (MW)	2029	16	16	16	16			
Installed Capacity (MW)	FG			16		16	16	16
Available Energy (GWh)	2027	50	50	50				
Available Energy (GWh)	2029	50	50	50	50			
Available Energy (GWh)	FG			50		50	50	50
Generation (GWh)	2027	48	44	42				
Generation (GWh)	2029	50	50	49	48			
Generation (GWh)	FG			50		49	48	48
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	7 %				
Curtailment (%)	2029	0 %	2 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	4 %	13 %	17 %				
Total Dispatch Down (%)	2029	0 %	2 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-13 - Surplus, Curtailment and Constraint for Wind priority for Node Dundalk

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	16	
Installed Capacity (MW)	2029 (pro-rata)	16	
Installed Capacity (MW)	FG (pro-rata)		16
Available Energy (GWh)	2027 (GF)	50	
Available Energy (GWh)	2029 (pro-rata)	50	
Available Energy (GWh)	FG (pro-rata)		50
Generation (GWh)	2027 (GF)	48	
Generation (GWh)	2029 (pro-rata)	47	
Generation (GWh)	FG (pro-rata)		48
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		5 %

Table 2-14 - Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Dundalk

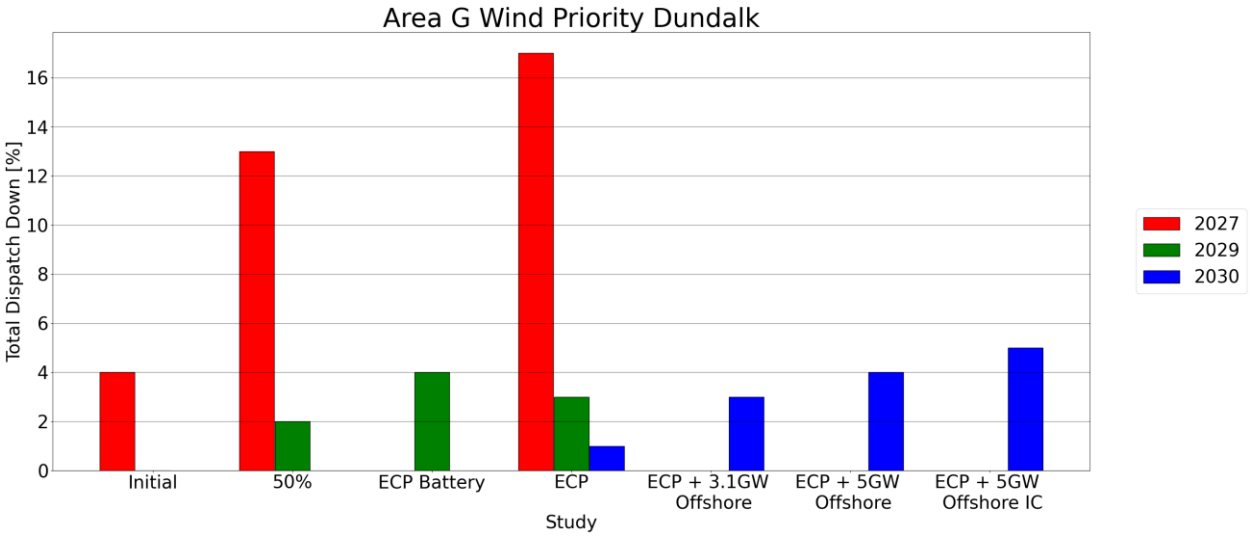

Figure 2-10 - Total Dispatch Down for Wind priority for Node Dundalk

2.5 Garballagh

Figure 2-11 - Location of node Garballagh

Generator	SO	Capacity	Type	Status
Gillinstown Solar	TSO	95.0	solar not priority	connected
Garballagh2 Solar Farm	TSO	48.0	solar not priority	due to connect

Table 2-15 - Generation Included in Study for Node Garballagh

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	95	119	143				
Installed Capacity (MW)	2029	95	119	143	143			
Installed Capacity (MW)	FG			143		143	143	143
Available Energy (GWh)	2027	122	152	183				
Available Energy (GWh)	2029	122	152	183	183			
Available Energy (GWh)	FG			183		183	183	183
Generation (GWh)	2027	107	130	142				
Generation (GWh)	2029	112	139	156	140			
Generation (GWh)	FG			163		157	148	137
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	11 %	7 %	4 %				
Constraint (%)	2029	8 %	4 %	3 %	4 %			
Constraint (%)	FG			5 %		2 %	2 %	2 %
Total Dispatch Down (%)	2027	12 %	15 %	22 %				
Total Dispatch Down (%)	2029	8 %	9 %	15 %	24 %			
Total Dispatch Down (%)	FG			11 %		14 %	19 %	25 %

Table 2-16 - Surplus, Curtailment and Constraint for Solar non-priority for Node Garballagh

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	119	
Installed Capacity (MW)	2029 (pro-rata)	119	
Installed Capacity (MW)	FG (pro-rata)		143
Available Energy (GWh)	2027 (GF)	152	
Available Energy (GWh)	2029 (pro-rata)	152	
Available Energy (GWh)	FG (pro-rata)		183
Generation (GWh)	2027 (GF)	130	
Generation (GWh)	2029 (pro-rata)	139	
Generation (GWh)	FG (pro-rata)		157
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	7 %	
Constraint (%)	2029 (pro-rata)	4 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	9 %	
Total Dispatch Down (%)	FG (pro-rata)		14 %

Table 2-17 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Garballagh

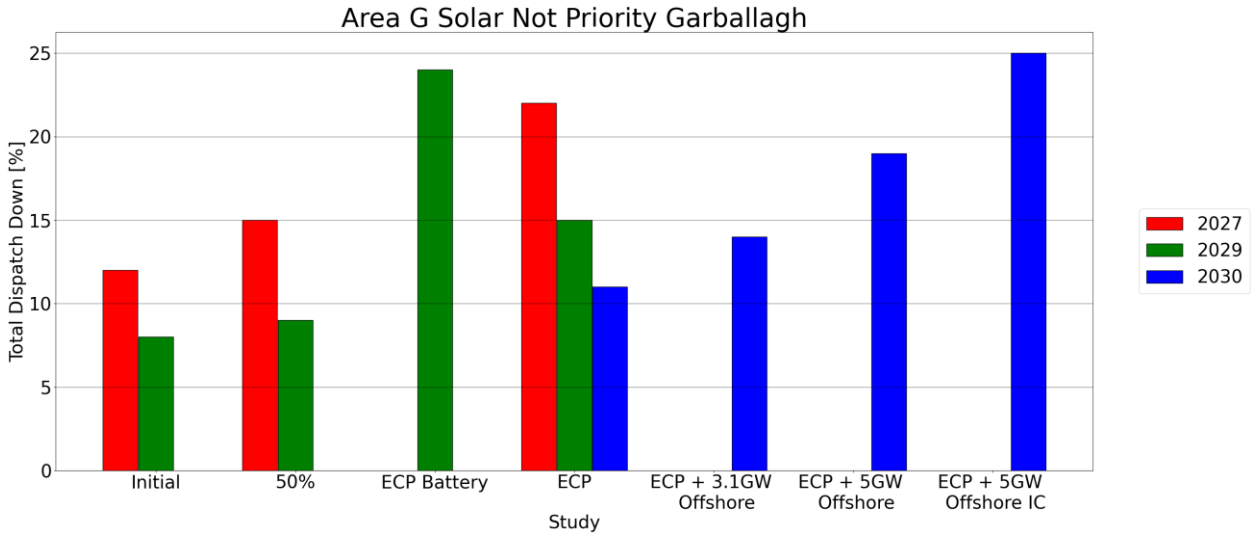

Figure 2-12 - Total Dispatch Down for Solar not priority for Node Garballagh

2.6 Gaskinstown

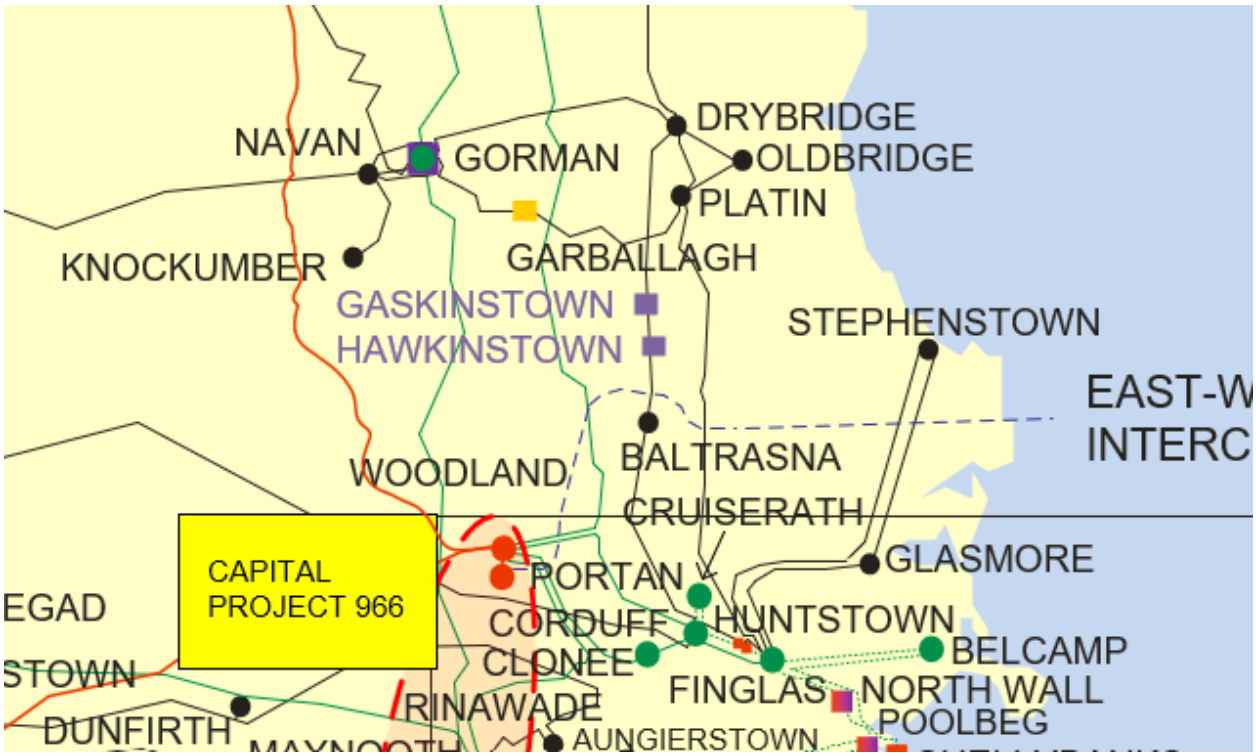

Figure 2-13 - Location of node Gaskinstown

Generator	SO	Capacity	Type	Status
Gaskinstown Solar Farm	TSO	85.0	solar not priority	due to connect

Table 2-18 - Generation Included in Study for Node Gaskinstown

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	85	85	85				
Installed Capacity (MW)	2029	85	85	85	85			
Installed Capacity (MW)	FG			85		85	85	85
Available Energy (GWh)	2027	109	109	109				
Available Energy (GWh)	2029	109	109	109	109			
Available Energy (GWh)	FG			109		109	109	109
Generation (GWh)	2027	96	93	85				
Generation (GWh)	2029	100	99	93	83			
Generation (GWh)	FG			97		93	88	81
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	11 %	7 %	4 %				
Constraint (%)	2029	8 %	4 %	3 %	4 %			
Constraint (%)	FG			5 %		2 %	2 %	2 %
Total Dispatch Down (%)	2027	12 %	15 %	22 %				
Total Dispatch Down (%)	2029	8 %	9 %	15 %	24 %			
Total Dispatch Down (%)	FG			11 %		14 %	19 %	25 %

Table 2-19 - Surplus, Curtailment and Constraint for Solar non-priority for Node Gaskinstown

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	85	
Installed Capacity (MW)	2029 (pro-rata)	85	
Installed Capacity (MW)	FG (pro-rata)		85
Available Energy (GWh)	2027 (GF)	109	
Available Energy (GWh)	2029 (pro-rata)	109	
Available Energy (GWh)	FG (pro-rata)		109
Generation (GWh)	2027 (GF)	93	
Generation (GWh)	2029 (pro-rata)	99	
Generation (GWh)	FG (pro-rata)		93
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	7 %	
Constraint (%)	2029 (pro-rata)	4 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	9 %	
Total Dispatch Down (%)	FG (pro-rata)		14 %

Table 2-20 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Gaskinstown

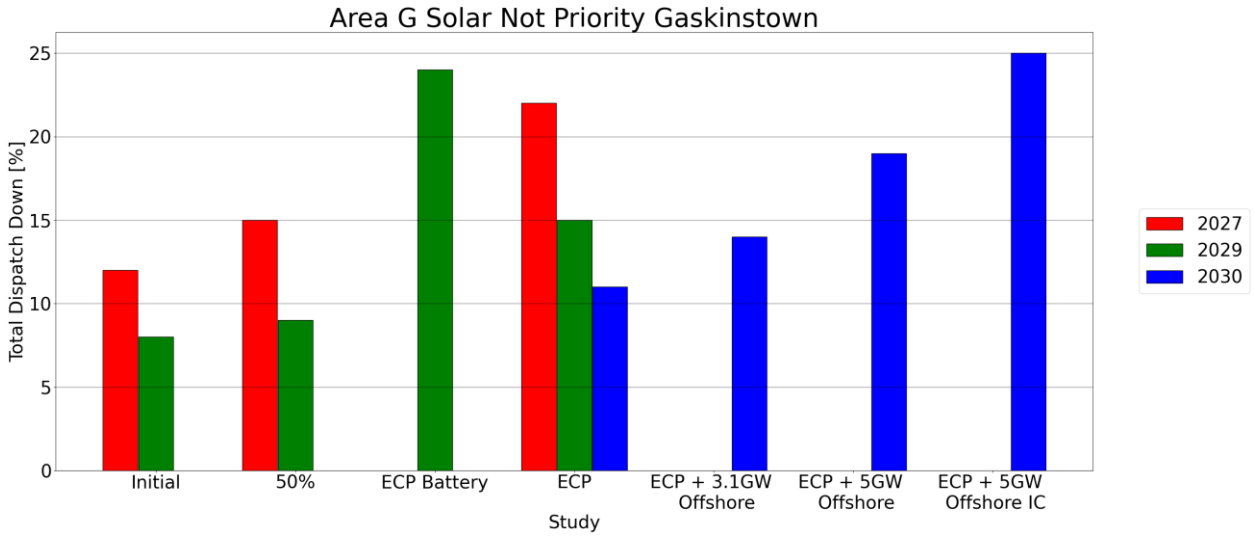

Figure 2-14 - Total Dispatch Down for Solar not priority for Node Gaskinstown

2.7 Gorman

Figure 2-15 - Location of node Gorman

Generator	SO	Capacity	Type	Status
Gorman Solar Farm	TSO	46.0	solar not priority	due to connect

Table 2-21 - Generation Included in Study for Node Gorman

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		23	46				
Installed Capacity (MW)	2029		23	46	46			
Installed Capacity (MW)	FG			46		46	46	46
Available Energy (GWh)	2027		29	59				
Available Energy (GWh)	2029		29	59	59			
Available Energy (GWh)	FG			59		59	59	59
Generation (GWh)	2027		25	46				
Generation (GWh)	2029		27	50	45			
Generation (GWh)	FG			52		51	48	44
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		7 %	4 %				
Constraint (%)	2029		4 %	3 %	4 %			
Constraint (%)	FG			5 %		2 %	2 %	2 %
Total Dispatch Down (%)	2027		15 %	22 %				
Total Dispatch Down (%)	2029		9 %	15 %	24 %			
Total Dispatch Down (%)	FG			11 %		14 %	19 %	25 %

Table 2-22 - Surplus, Curtailment and Constraint for Solar non-priority for Node Gorman

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	23	
Installed Capacity (MW)	2029 (pro-rata)	23	
Installed Capacity (MW)	FG (pro-rata)		46
Available Energy (GWh)	2027 (GF)	29	
Available Energy (GWh)	2029 (pro-rata)	29	
Available Energy (GWh)	FG (pro-rata)		59
Generation (GWh)	2027 (GF)	25	
Generation (GWh)	2029 (pro-rata)	27	
Generation (GWh)	FG (pro-rata)		51
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	7 %	
Constraint (%)	2029 (pro-rata)	4 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	9 %	
Total Dispatch Down (%)	FG (pro-rata)		14 %

Table 2-23 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Gorman

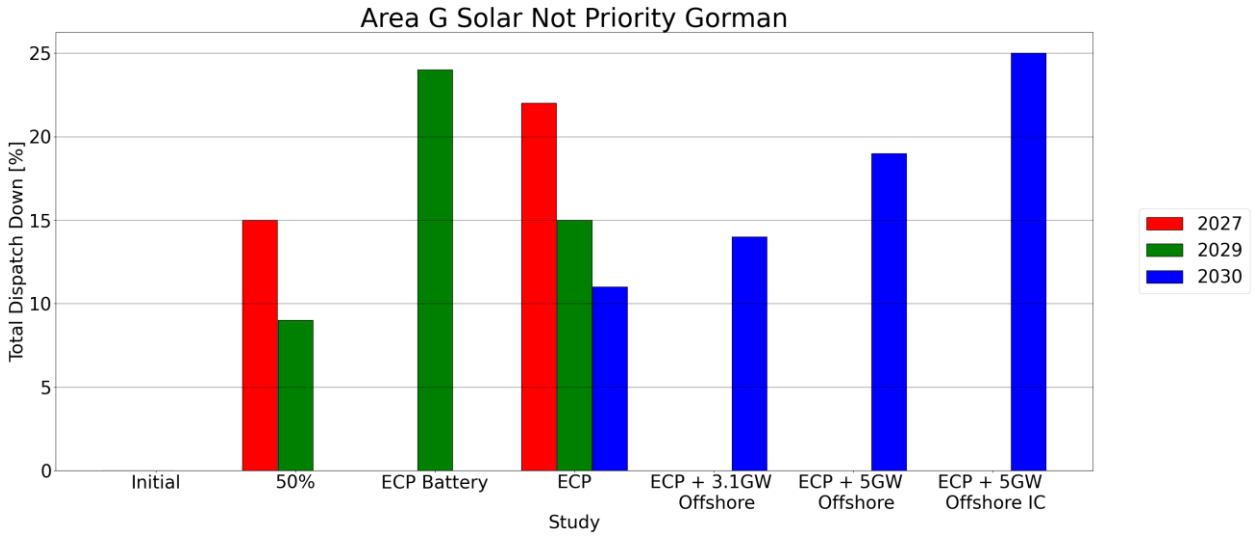

Figure 2-16 - Total Dispatch Down for Solar not priority for Node Gorman

2.8 Lisdrum

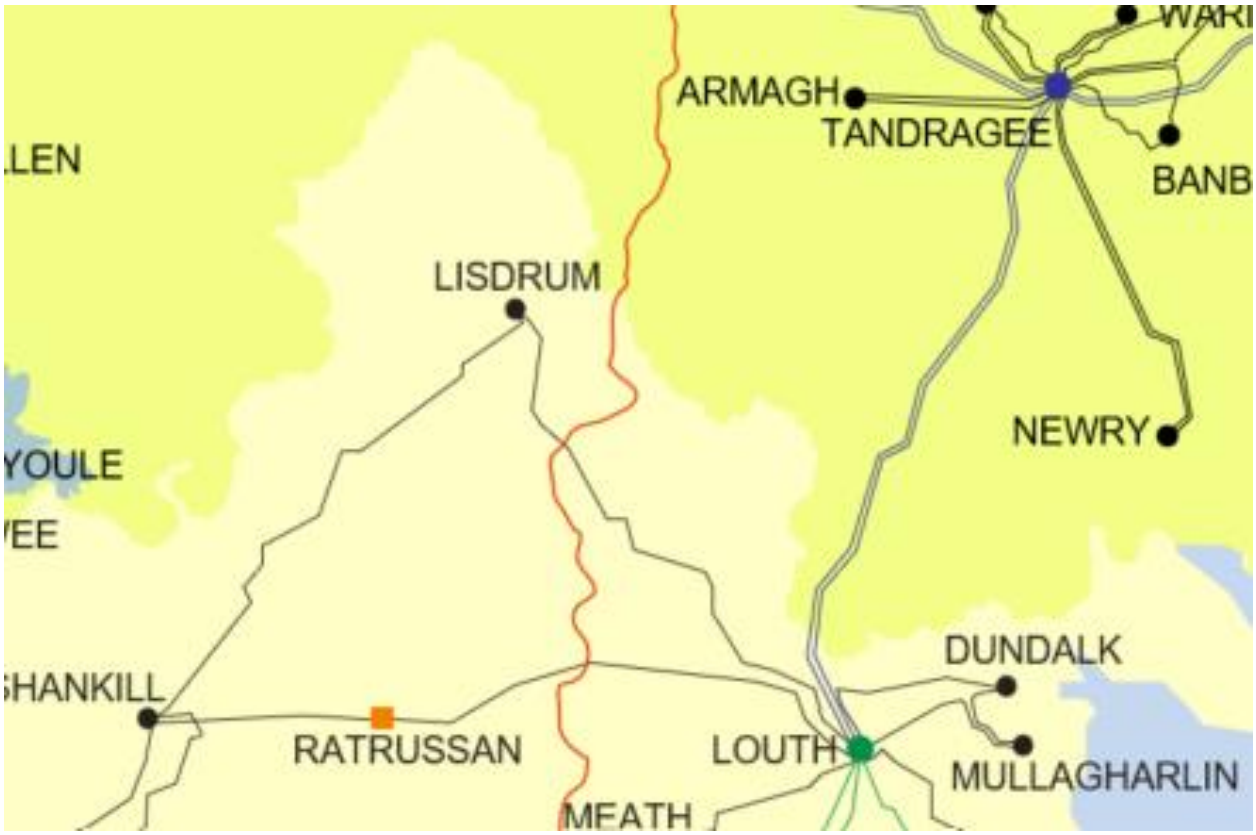

Figure 2-17 - Location of node Lisdrum

Generator	SO	Capacity	Type	Status
Coolberrin Wind Farm (formerly Bragan Wind Farm)	DSO	33.1	wind not priority	due to connect

Table 2-24 - Generation Included in Study for Node Lisdrum

The wind not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	33	33	33				
Installed Capacity (MW)	2029	33	33	33	33			
Installed Capacity (MW)	FG			33		33	33	33
Available Energy (GWh)	2027	103	103	103				
Available Energy (GWh)	2029	103	103	103	103			
Available Energy (GWh)	FG			103		103	103	103
Generation (GWh)	2027	99	85	75				
Generation (GWh)	2029	98	89	84	55			
Generation (GWh)	FG			50		84	76	67
Surplus (%)	2027	1 %	6 %	13 %				
Surplus (%)	2029	0 %	2 %	6 %	9 %			
Surplus (%)	FG			3 %		13 %	23 %	32 %
Curtailment (%)	2027	2 %	3 %	4 %				
Curtailment (%)	2029	0 %	1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	5 %	10 %	11 %	35 %			
Constraint (%)	FG			49 %		4 %	1 %	0 %
Total Dispatch Down (%)	2027	5 %	18 %	28 %				
Total Dispatch Down (%)	2029	5 %	14 %	19 %	47 %			
Total Dispatch Down (%)	FG			52 %		19 %	27 %	35 %

Table 2-25 - Surplus, Curtailment and Constraint for Wind non-priority for Node Lisdrum

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	33	
Installed Capacity (MW)	2029 (pro-rata)	33	
Installed Capacity (MW)	FG (pro-rata)		33
Available Energy (GWh)	2027 (GF)	103	
Available Energy (GWh)	2029 (pro-rata)	103	
Available Energy (GWh)	FG (pro-rata)		103
Generation (GWh)	2027 (GF)	74	
Generation (GWh)	2029 (pro-rata)	95	
Generation (GWh)	FG (pro-rata)		86
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		13 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	19 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	28 %	
Total Dispatch Down (%)	2029 (pro-rata)	8 %	
Total Dispatch Down (%)	FG (pro-rata)		17 %

Table 2-26 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Lisdrum

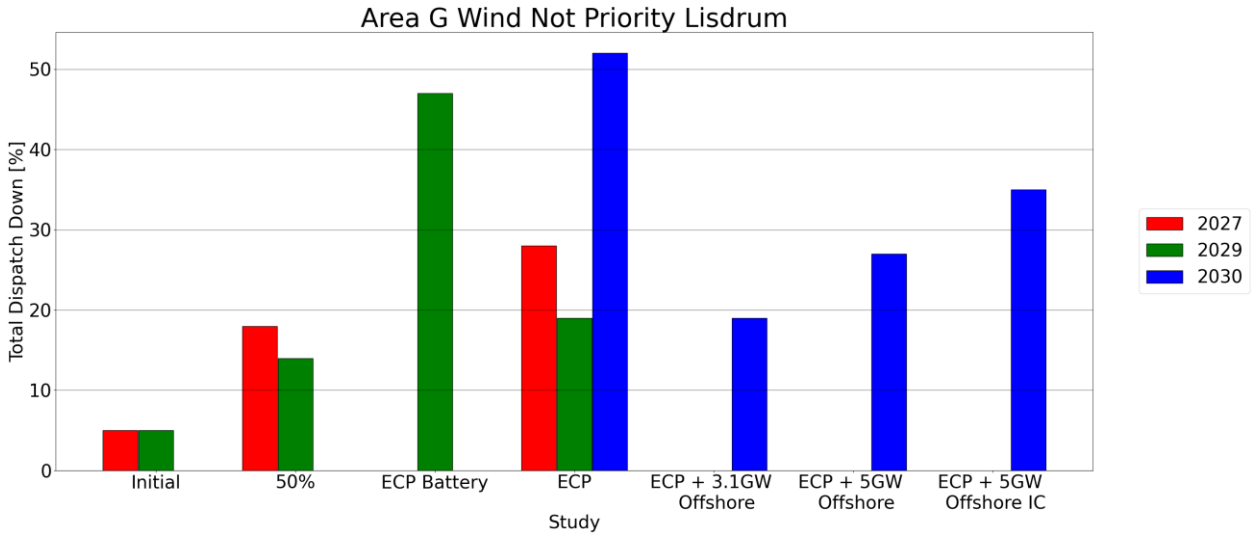

Figure 2-18 - Total Dispatch Down for Wind not priority for Node Lisdrum

2.9 Lislea

Figure 2-19 - Location of node Lislea

Generator	SO	Capacity	Type	Status
Drumlins Park wind	TSO	48.8	wind not priority	connected

Table 2-27 - Generation Included in Study for Node Lislea

The wind not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	49	49	49				
Installed Capacity (MW)	2029	49	49	49	49			
Installed Capacity (MW)	FG			49		49	49	49
Available Energy (GWh)	2027	152	152	152				
Available Energy (GWh)	2029	152	152	152	152			
Available Energy (GWh)	FG			152		152	152	152
Generation (GWh)	2027	146	125	110				
Generation (GWh)	2029	145	132	124	80			
Generation (GWh)	FG			73		124	112	99
Surplus (%)	2027	1 %	6 %	13 %				
Surplus (%)	2029	0 %	2 %	6 %	9 %			
Surplus (%)	FG			3 %		13 %	23 %	32 %
Curtailment (%)	2027	2 %	3 %	4 %				
Curtailment (%)	2029	0 %	1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	5 %	10 %	11 %	35 %			
Constraint (%)	FG			49 %		4 %	1 %	0 %
Total Dispatch Down (%)	2027	5 %	18 %	28 %				
Total Dispatch Down (%)	2029	5 %	14 %	19 %	47 %			
Total Dispatch Down (%)	FG			52 %		19 %	27 %	35 %

Table 2-28 - Surplus, Curtailment and Constraint for Wind non-priority for Node Lislea

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	49	
Installed Capacity (MW)	2029 (pro-rata)	49	
Installed Capacity (MW)	FG (pro-rata)		49
Available Energy (GWh)	2027 (GF)	152	
Available Energy (GWh)	2029 (pro-rata)	152	
Available Energy (GWh)	FG (pro-rata)		152
Generation (GWh)	2027 (GF)	109	
Generation (GWh)	2029 (pro-rata)	140	
Generation (GWh)	FG (pro-rata)		127
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		13 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	19 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	28 %	
Total Dispatch Down (%)	2029 (pro-rata)	8 %	
Total Dispatch Down (%)	FG (pro-rata)		17 %

Table 2-29 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Lislea

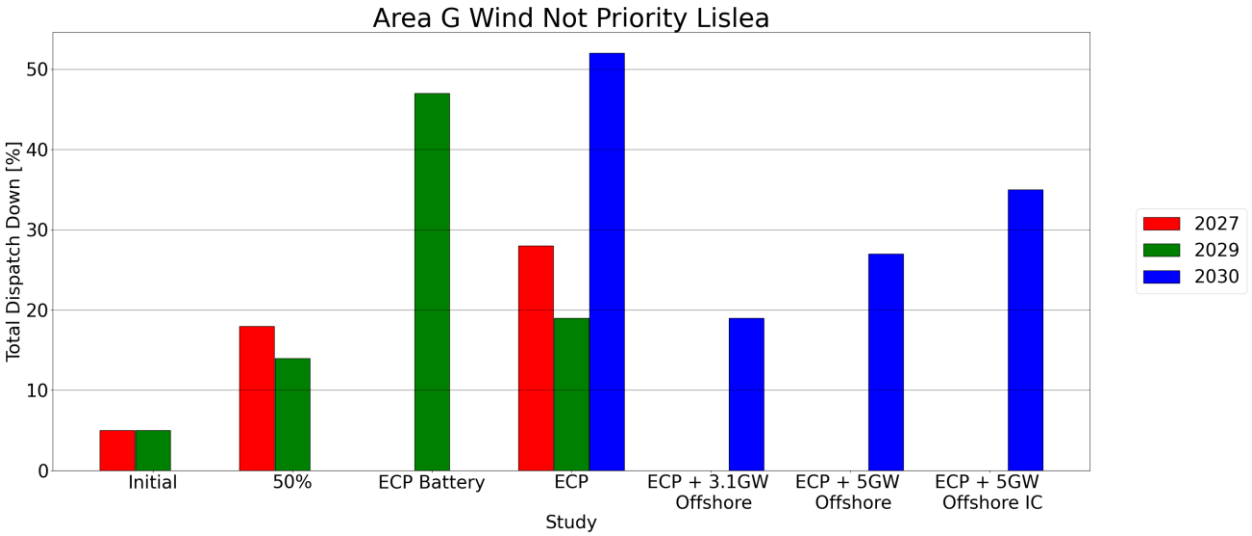

Figure 2-20 - Total Dispatch Down for Wind not priority for Node Lislea

2.10 Louth

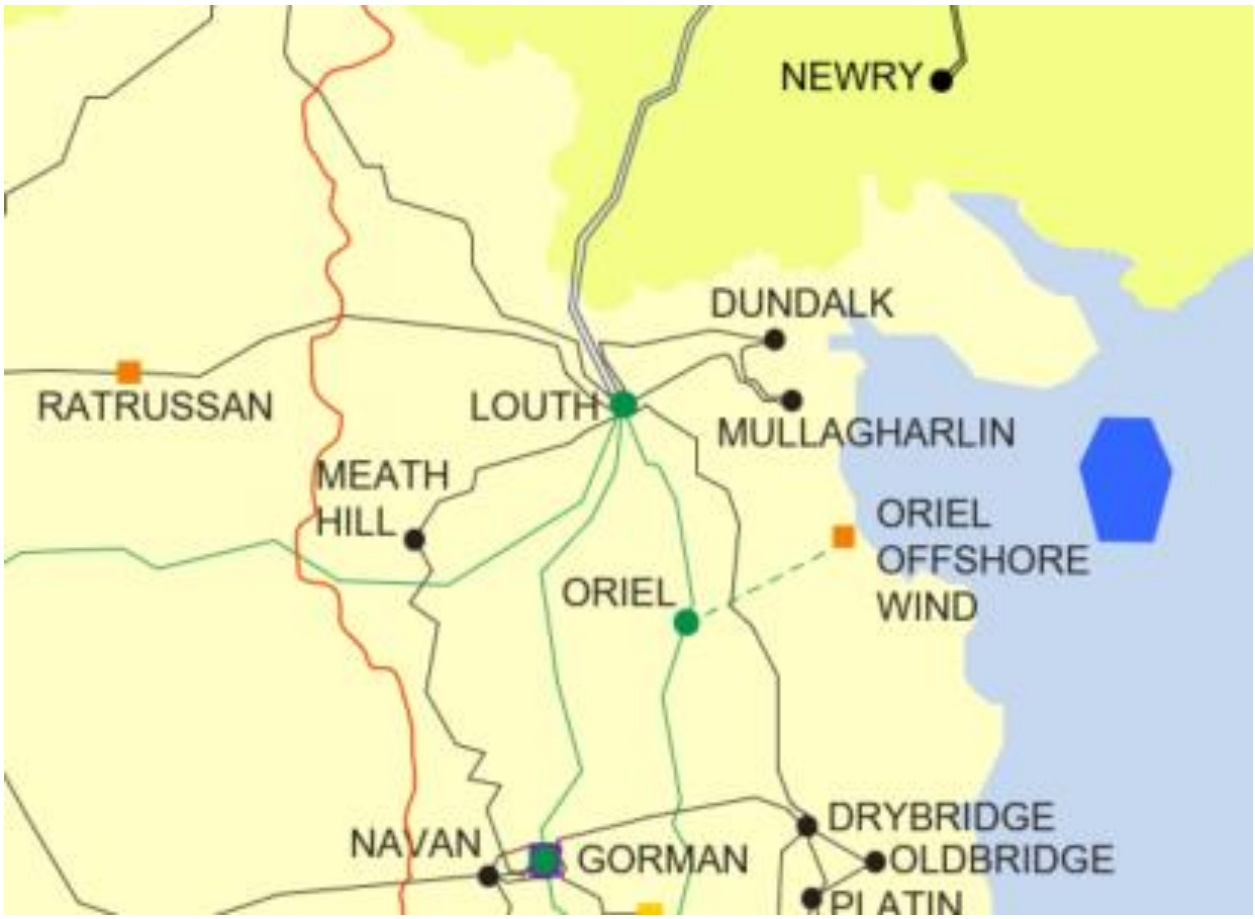

Figure 2-21 - Location of node Louth

Generator	SO	Capacity	Type	Status
Monvallet Hybrid Solar & Battery Farm	TSO	50.0	solar not priority	due to connect
Drumgoolan Solar and Battery Farm	TSO	196.5	solar not priority	due to connect

Table 2-30 - Generation Included in Study for Node Louth

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		123	246				
Installed Capacity (MW)	2029		123	246	246			
Installed Capacity (MW)	FG			246		246	246	246
Available Energy (GWh)	2027		158	316				
Available Energy (GWh)	2029		158	316	316			
Available Energy (GWh)	FG			316		316	316	316
Generation (GWh)	2027		141	248				
Generation (GWh)	2029		149	276	248			
Generation (GWh)	FG			286		276	261	241
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027		11 %	21 %				
Total Dispatch Down (%)	2029		6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 2-31 - Surplus, Curtailment and Constraint for Solar non-priority for Node Louth

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	123	
Installed Capacity (MW)	2029 (pro-rata)	123	
Installed Capacity (MW)	FG (pro-rata)		246
Available Energy (GWh)	2027 (GF)	158	
Available Energy (GWh)	2029 (pro-rata)	158	
Available Energy (GWh)	FG (pro-rata)		316
Generation (GWh)	2027 (GF)	141	
Generation (GWh)	2029 (pro-rata)	149	
Generation (GWh)	FG (pro-rata)		276
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 2-32 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Louth

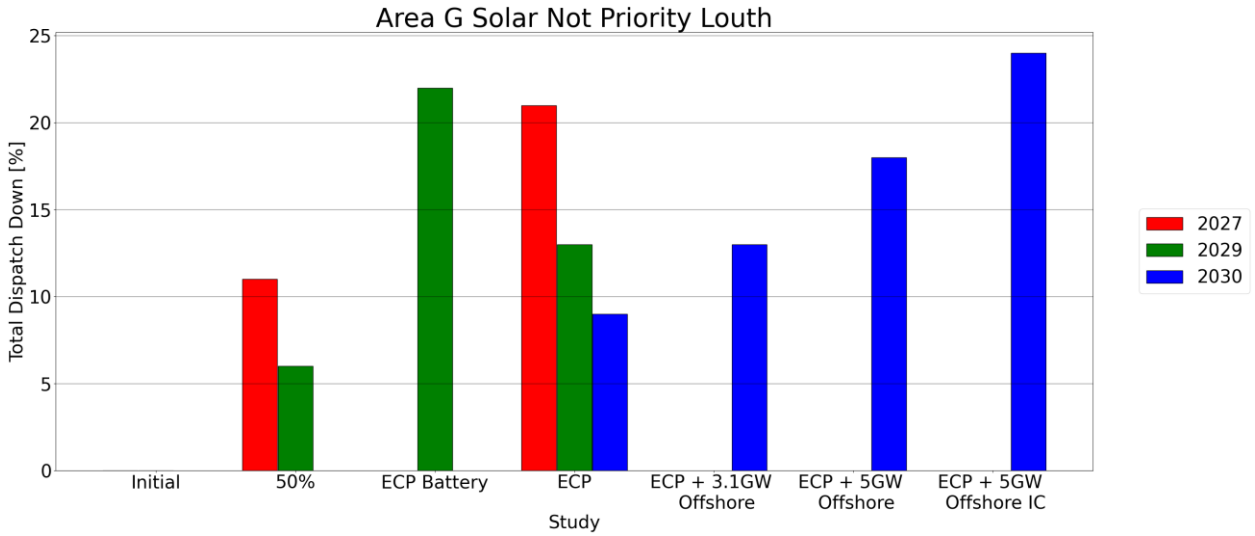

Figure 2-22 - Total Dispatch Down for Solar not priority for Node Louth

2.11 Meath hill

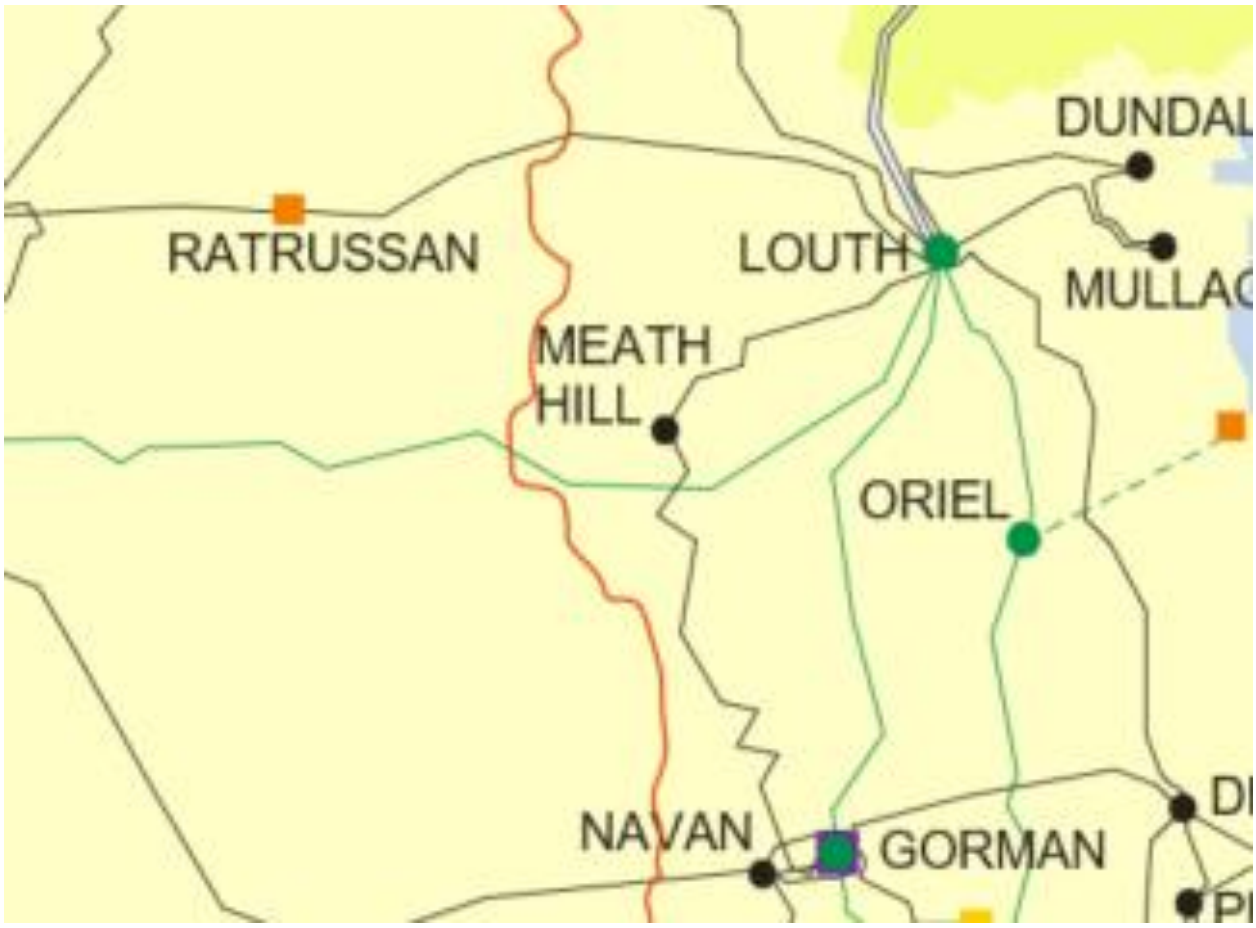

Figure 2-23 - Location of node Meath hill

Generator	SO	Capacity	Type	Status
Gartnaneane (1)	DSO	10.5	wind uncontrolled	connected
Gartnaneane (2)	DSO	4.5	wind uncontrolled	connected
Mullananalt (1)	DSO	7.5	wind priority	connected
Raragh (2)	DSO	11.5	wind not priority	connected
Tullynamalra (1)	DSO	2.638	wind uncontrolled	connected
Teevurcher	DSO	9.0	wind priority	connected
Taghart (1)	DSO	23.06	wind not priority	connected
College Export AutoProducer (solar)	DSO	0.4	solar not priority	due to connect

Table 2-33 - Generation Included in Study for Node Meath hill

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		0	0				
Installed Capacity (MW)	2029		0	0	0			
Installed Capacity (MW)	FG			0		0	0	0
Available Energy (GWh)	2027		0	1				
Available Energy (GWh)	2029		0	1	1			
Available Energy (GWh)	FG			1		1	1	1
Generation (GWh)	2027		0	0				
Generation (GWh)	2029		0	0	0			
Generation (GWh)	FG			0		0	0	0
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027		11 %	21 %				
Total Dispatch Down (%)	2029		6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 2-34 - Surplus, Curtailment and Constraint for Solar non-priority for Node Meath hill

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	0	
Installed Capacity (MW)	2029 (pro-rata)	0	
Installed Capacity (MW)	FG (pro-rata)		0
Available Energy (GWh)	2027 (GF)	0	
Available Energy (GWh)	2029 (pro-rata)	0	
Available Energy (GWh)	FG (pro-rata)		1
Generation (GWh)	2027 (GF)	0	
Generation (GWh)	2029 (pro-rata)	0	
Generation (GWh)	FG (pro-rata)		0
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 2-35 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Meath hill

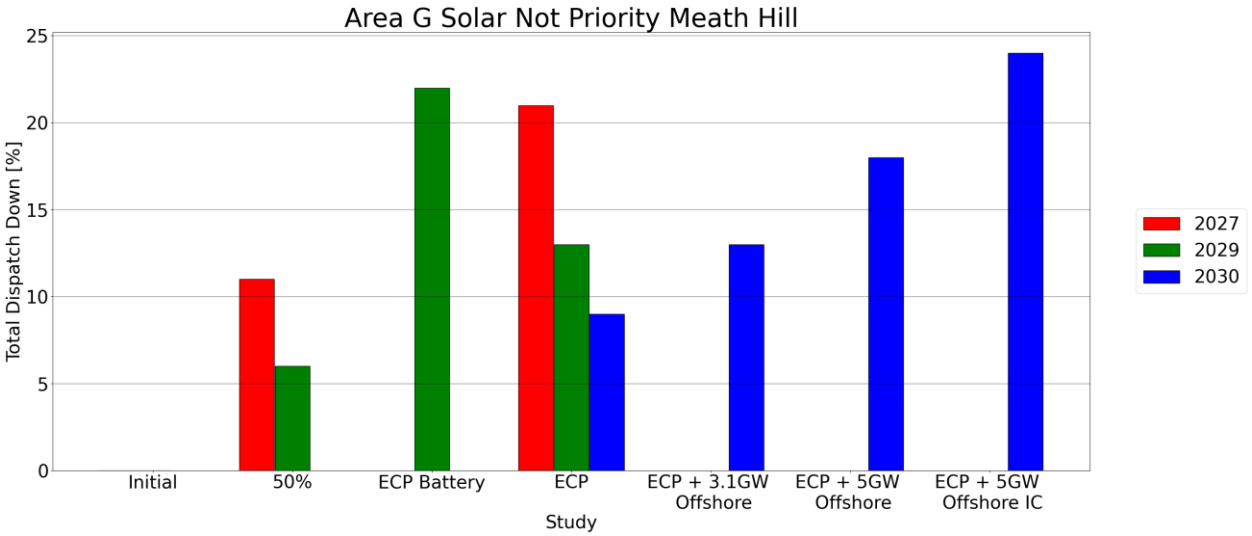

Figure 2-24 - Total Dispatch Down for Solar not priority for Node Meath hill

The wind not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	35	35	35				
Installed Capacity (MW)	2029	35	35	35	35			
Installed Capacity (MW)	FG			35		35	35	35
Available Energy (GWh)	2027	108	108	108				
Available Energy (GWh)	2029	108	108	108	108			
Available Energy (GWh)	FG			108		108	108	108
Generation (GWh)	2027	103	88	78				
Generation (GWh)	2029	102	93	88	57			
Generation (GWh)	FG			52		88	79	70
Surplus (%)	2027	1 %	6 %	13 %				
Surplus (%)	2029	0 %	2 %	6 %	9 %			
Surplus (%)	FG			3 %		13 %	23 %	32 %
Curtailment (%)	2027	2 %	3 %	4 %				
Curtailment (%)	2029	0 %	1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	5 %	10 %	11 %	35 %			
Constraint (%)	FG			49 %		4 %	1 %	0 %
Total Dispatch Down (%)	2027	5 %	18 %	28 %				
Total Dispatch Down (%)	2029	5 %	14 %	19 %	47 %			
Total Dispatch Down (%)	FG			52 %		19 %	27 %	35 %

Table 2-36 - Surplus, Curtailment and Constraint for Wind non-priority for Node Meath hill

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	35	
Installed Capacity (MW)	2029 (pro-rata)	35	
Installed Capacity (MW)	FG (pro-rata)		35
Available Energy (GWh)	2027 (GF)	108	
Available Energy (GWh)	2029 (pro-rata)	108	
Available Energy (GWh)	FG (pro-rata)		108
Generation (GWh)	2027 (GF)	77	
Generation (GWh)	2029 (pro-rata)	99	
Generation (GWh)	FG (pro-rata)		90
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		13 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	19 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	28 %	
Total Dispatch Down (%)	2029 (pro-rata)	8 %	
Total Dispatch Down (%)	FG (pro-rata)		17 %

Table 2-37 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Meath hill

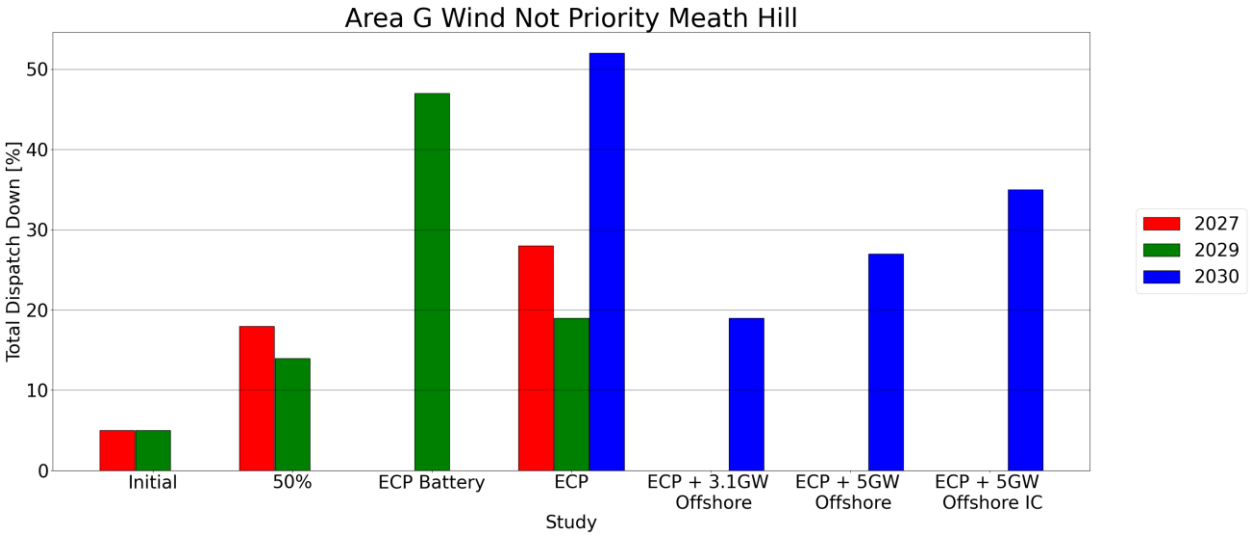

Figure 2-25 - Total Dispatch Down for Wind not priority for Node Meath hill

The wind priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	16	16	16				
Installed Capacity (MW)	2029	16	16	16	16			
Installed Capacity (MW)	FG			16		16	16	16
Available Energy (GWh)	2027	52	52	52				
Available Energy (GWh)	2029	52	52	52	52			
Available Energy (GWh)	FG			52		52	52	52
Generation (GWh)	2027	50	45	43				
Generation (GWh)	2029	51	51	50	49			
Generation (GWh)	FG			51		50	50	49
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	7 %				
Curtailment (%)	2029	0 %	2 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	4 %	13 %	17 %				
Total Dispatch Down (%)	2029	0 %	2 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-38 - Surplus, Curtailment and Constraint for Wind priority for Node Meath hill

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	16	
Installed Capacity (MW)	2029 (pro-rata)	16	
Installed Capacity (MW)	FG (pro-rata)		16
Available Energy (GWh)	2027 (GF)	52	
Available Energy (GWh)	2029 (pro-rata)	52	
Available Energy (GWh)	FG (pro-rata)		52
Generation (GWh)	2027 (GF)	49	
Generation (GWh)	2029 (pro-rata)	48	
Generation (GWh)	FG (pro-rata)		49
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		5 %

Table 2-39 - Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Meath hill

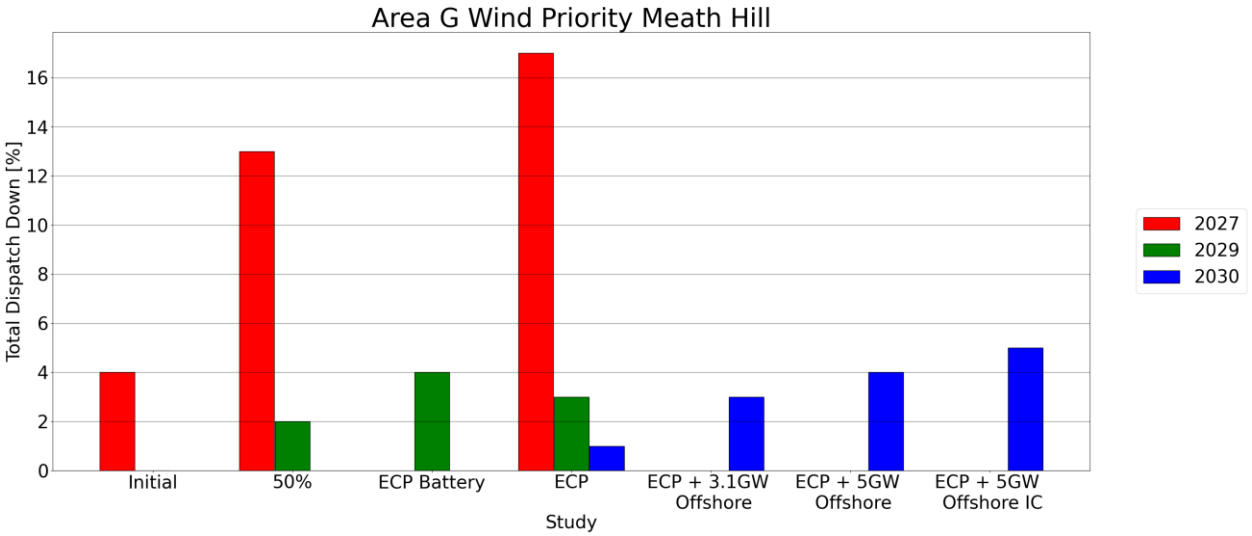

Figure 2-26 - Total Dispatch Down for Wind priority for Node Meath hill

2.12 Navan

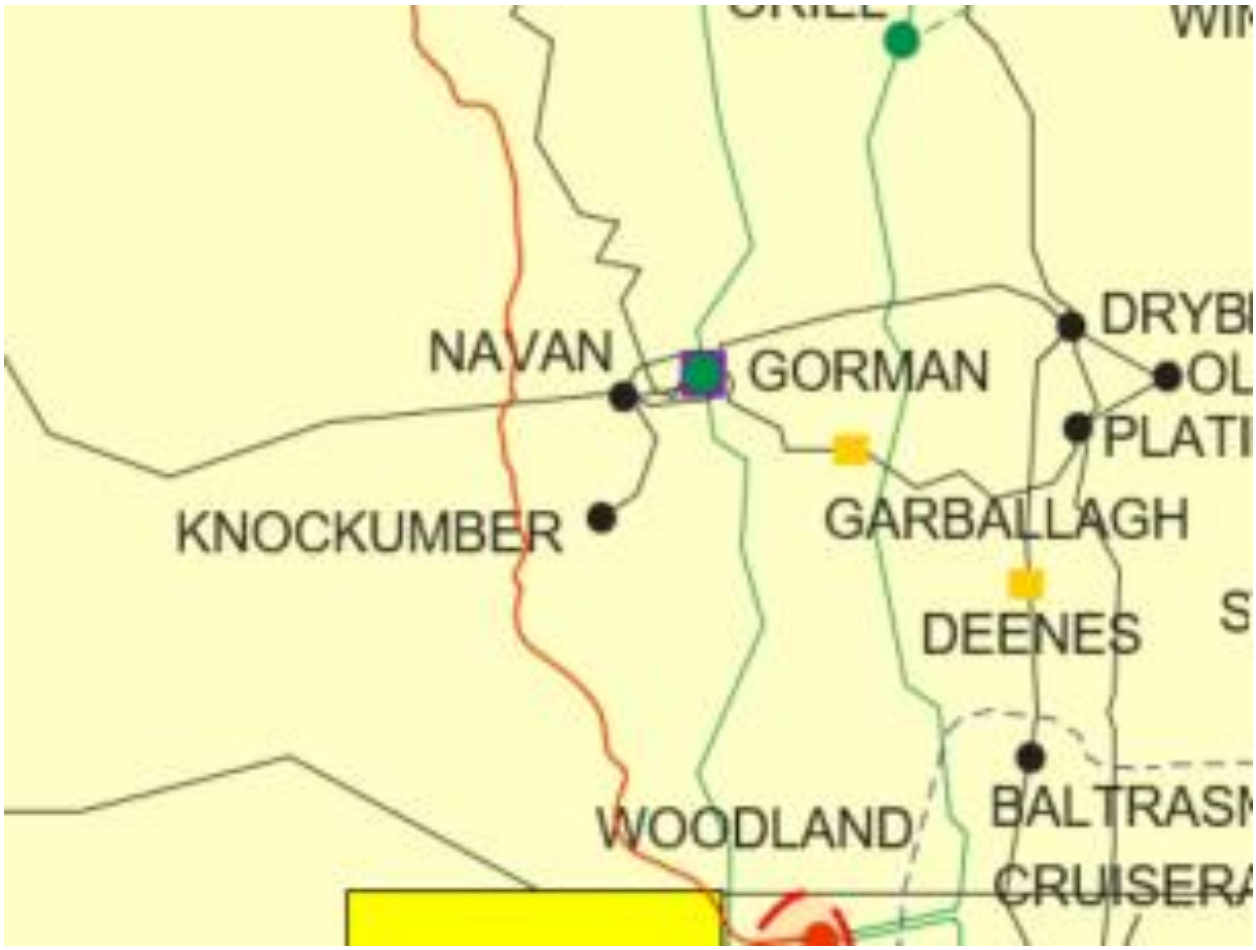

Figure 2-27 - Location of node Navan

Generator	SO	Capacity	Type	Status
Martinstown Solar formerly Crowinstown Great wind	DSO	4.999	solar not priority	due to connect
Kilkeelan Solar Farm	DSO	4.0	solar not priority	due to connect
Friarspark (was Glebe Golf Course)	DSO	4.0	solar not priority	due to connect
Friarspark Solar 2	DSO	2.1	solar not priority	due to connect
Kilkeelan Phase 2 Solar Farm	DSO	1.35	solar not priority	due to connect
Project GiMAT	DSO	4.99	solar not priority	due to connect

Table 2-40 - Generation Included in Study for Node Navan

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	11	16	21				
Installed Capacity (MW)	2029	11	16	21	21			
Installed Capacity (MW)	FG			21		21	21	21
Available Energy (GWh)	2027	14	21	27				
Available Energy (GWh)	2029	14	21	27	27			
Available Energy (GWh)	FG			27		27	27	27
Generation (GWh)	2027	14	19	22				
Generation (GWh)	2029	14	20	24	22			
Generation (GWh)	FG			25		24	23	21
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	1 %	3 %	3 %				
Constraint (%)	2029	1 %	1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	2 %	11 %	21 %				
Total Dispatch Down (%)	2029	1 %	6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 2-41 - Surplus, Curtailment and Constraint for Solar non-priority for Node Navan

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	16	
Installed Capacity (MW)	2029 (pro-rata)	16	
Installed Capacity (MW)	FG (pro-rata)		21
Available Energy (GWh)	2027 (GF)	21	
Available Energy (GWh)	2029 (pro-rata)	21	
Available Energy (GWh)	FG (pro-rata)		27
Generation (GWh)	2027 (GF)	19	
Generation (GWh)	2029 (pro-rata)	20	
Generation (GWh)	FG (pro-rata)		24
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 2-42 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Navan

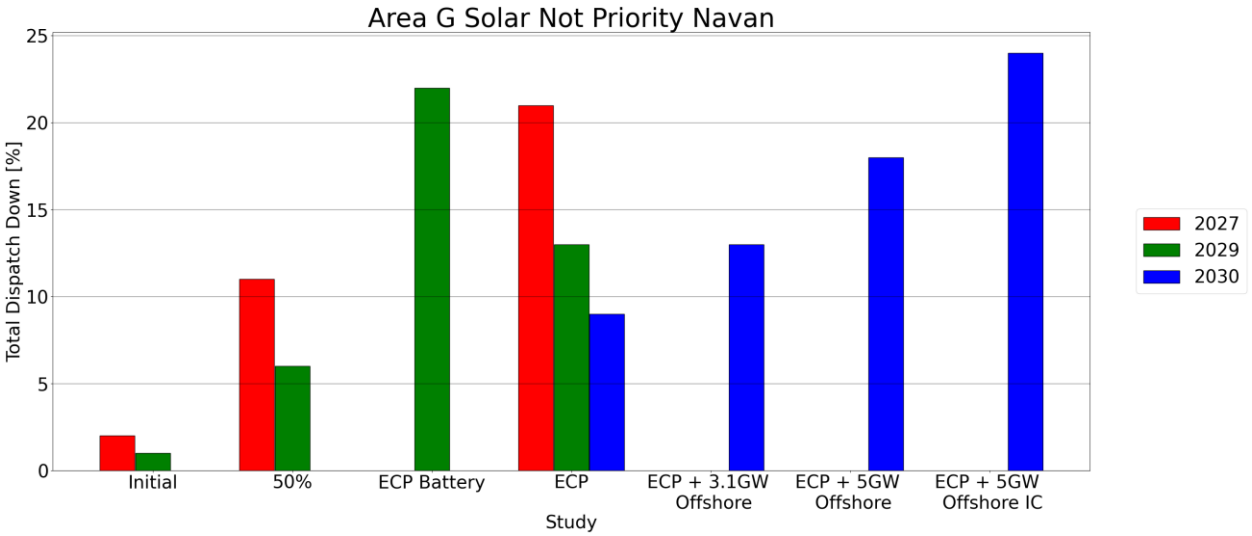

Figure 2-28 - Total Dispatch Down for Solar not priority for Node Navan

2.13 Oriel 220kV

Figure 2-29 - Location of node Oriel 220kV

Generator	SO	Capacity	Type	Status
Oriel 1	TSO	210.0	wind not priority	due to connect
Oriel offshore new A	TSO	160.0	wind not priority	due to connect

Table 2-43 - Generation Included in Study for Node Oriel 220kV

The wind not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027							
Installed Capacity (MW)	2029							
Installed Capacity (MW)	FG						370	370
Available Energy (GWh)	2027							
Available Energy (GWh)	2029							
Available Energy (GWh)	FG						1550	1550
Generation (GWh)	2027							
Generation (GWh)	2029							
Generation (GWh)	FG						1174	1047
Surplus (%)	2027							
Surplus (%)	2029							
Surplus (%)	FG						21 %	29 %
Curtailment (%)	2027							
Curtailment (%)	2029							
Curtailment (%)	FG						2 %	3 %
Constraint (%)	2027							
Constraint (%)	2029							
Constraint (%)	FG						1 %	0 %
Total Dispatch Down (%)	2027							
Total Dispatch Down (%)	2029							
Total Dispatch Down (%)	FG						24 %	32 %

Table 2-44 - Surplus, Curtailment and Constraint for Wind non-priority for Node Oriel 220kV

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)		
Installed Capacity (MW)	2029 (pro-rata)		
Installed Capacity (MW)	FG (pro-rata)		
Available Energy (GWh)	2027 (GF)		
Available Energy (GWh)	2029 (pro-rata)		
Available Energy (GWh)	FG (pro-rata)		
Generation (GWh)	2027 (GF)		
Generation (GWh)	2029 (pro-rata)		
Generation (GWh)	FG (pro-rata)		
Surplus (%)	2027 (GF)		
Surplus (%)	2029 (pro-rata)		
Surplus (%)	FG (pro-rata)		
Curtailment (%)	2027 (GF)		
Curtailment (%)	2029 (pro-rata)		
Curtailment (%)	FG (pro-rata)		
Constraint (%)	2027 (GF)		
Constraint (%)	2029 (pro-rata)		
Constraint (%)	FG (pro-rata)		
Total Dispatch Down (%)	2027 (GF)		
Total Dispatch Down (%)	2029 (pro-rata)		
Total Dispatch Down (%)	FG (pro-rata)		

Table 2-45 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Oriel 220kV

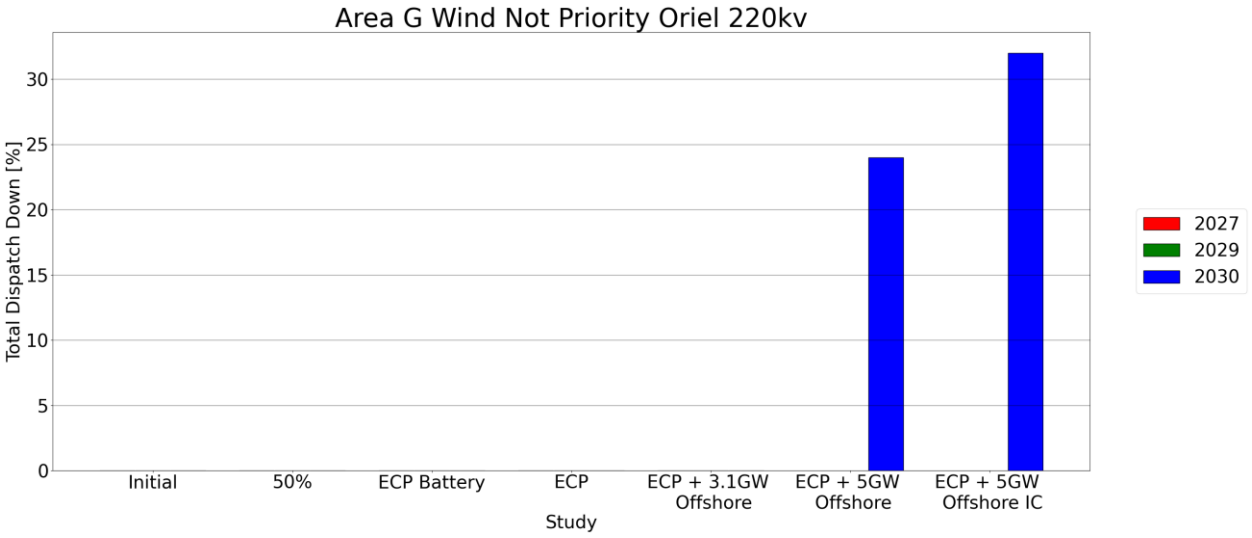

Figure 2-30 - Total Dispatch Down for Wind not priority for Node Oriel 220kV

2.14 Paddock

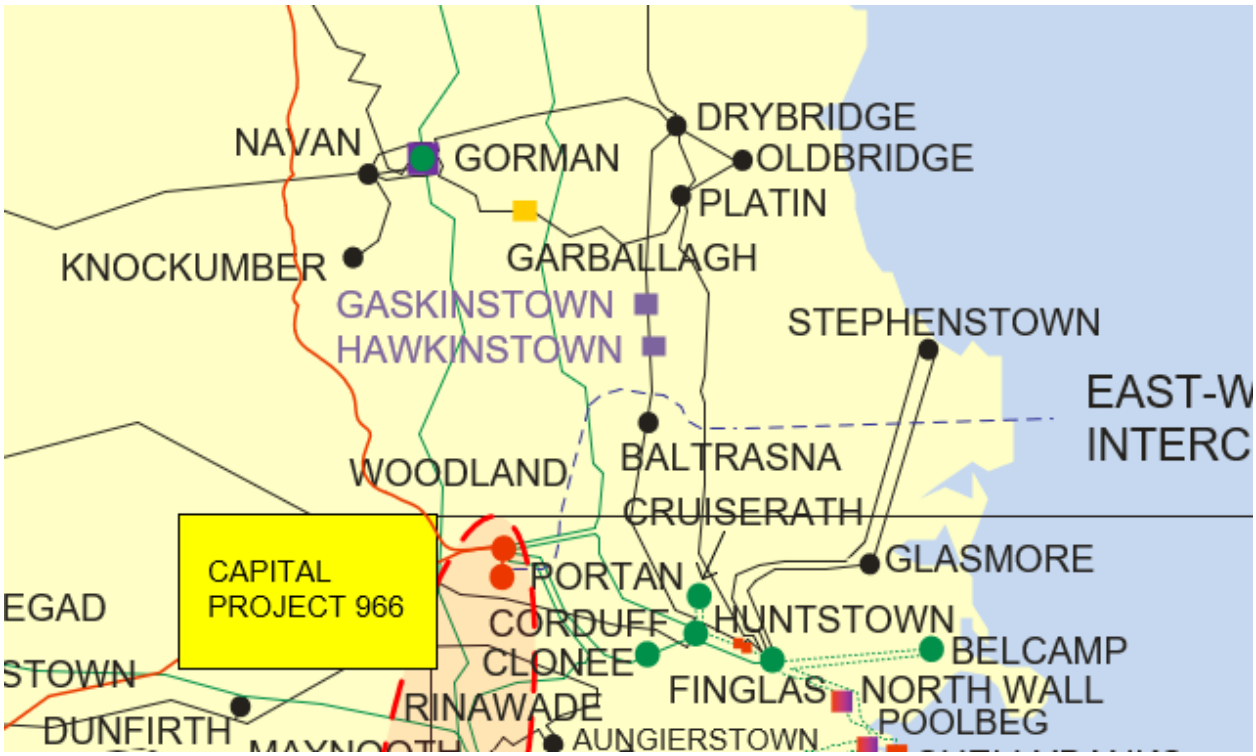

Figure 2-31 - Location of node Paddock

Generator	SO	Capacity	Type	Status
Darthogue Solar Farm	TSO	47.0	solar not priority	due to connect
Reask Solar Farm	TSO	55.0	solar not priority	due to connect
Darthogue Solar Farm Extension	TSO	70.0	solar not priority	due to connect
Kilrue Solar	TSO	195.0	solar not priority	due to connect
Reask Phase 2	TSO	30.0	solar not priority	due to connect

Table 2-46 - Generation Included in Study for Node Paddock

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		198	397				
Installed Capacity (MW)	2029		198	397	397			
Installed Capacity (MW)	FG			397		397	397	397
Available Energy (GWh)	2027		254	509				
Available Energy (GWh)	2029		254	509	509			
Available Energy (GWh)	FG			509		509	509	509
Generation (GWh)	2027		217	396				
Generation (GWh)	2029		231	434	387			
Generation (GWh)	FG			451		436	412	380
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		7 %	4 %				
Constraint (%)	2029		4 %	3 %	4 %			
Constraint (%)	FG			5 %		2 %	2 %	2 %
Total Dispatch Down (%)	2027		15 %	22 %				
Total Dispatch Down (%)	2029		9 %	15 %	24 %			
Total Dispatch Down (%)	FG			11 %		14 %	19 %	25 %

Table 2-47 - Surplus, Curtailment and Constraint for Solar non-priority for Node Paddock

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	198	
Installed Capacity (MW)	2029 (pro-rata)	198	
Installed Capacity (MW)	FG (pro-rata)		397
Available Energy (GWh)	2027 (GF)	254	
Available Energy (GWh)	2029 (pro-rata)	254	
Available Energy (GWh)	FG (pro-rata)		509
Generation (GWh)	2027 (GF)	217	
Generation (GWh)	2029 (pro-rata)	231	
Generation (GWh)	FG (pro-rata)		436
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	7 %	
Constraint (%)	2029 (pro-rata)	4 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	9 %	
Total Dispatch Down (%)	FG (pro-rata)		14 %

Table 2-48 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Paddock

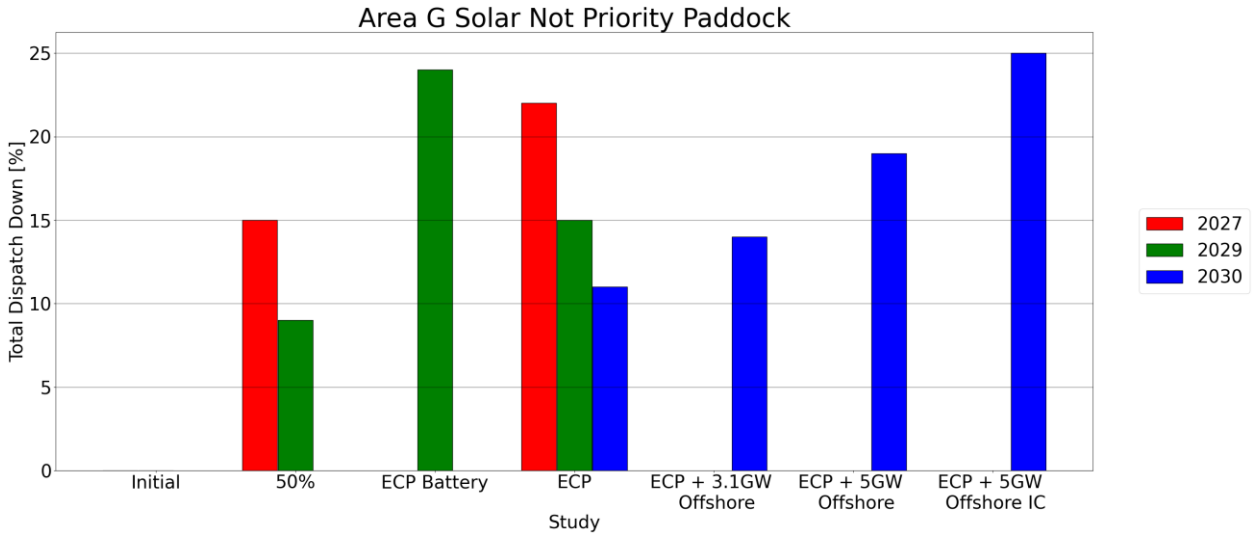

Figure 2-32 - Total Dispatch Down for Solar not priority for Node Paddock

2.15 Ratrussan

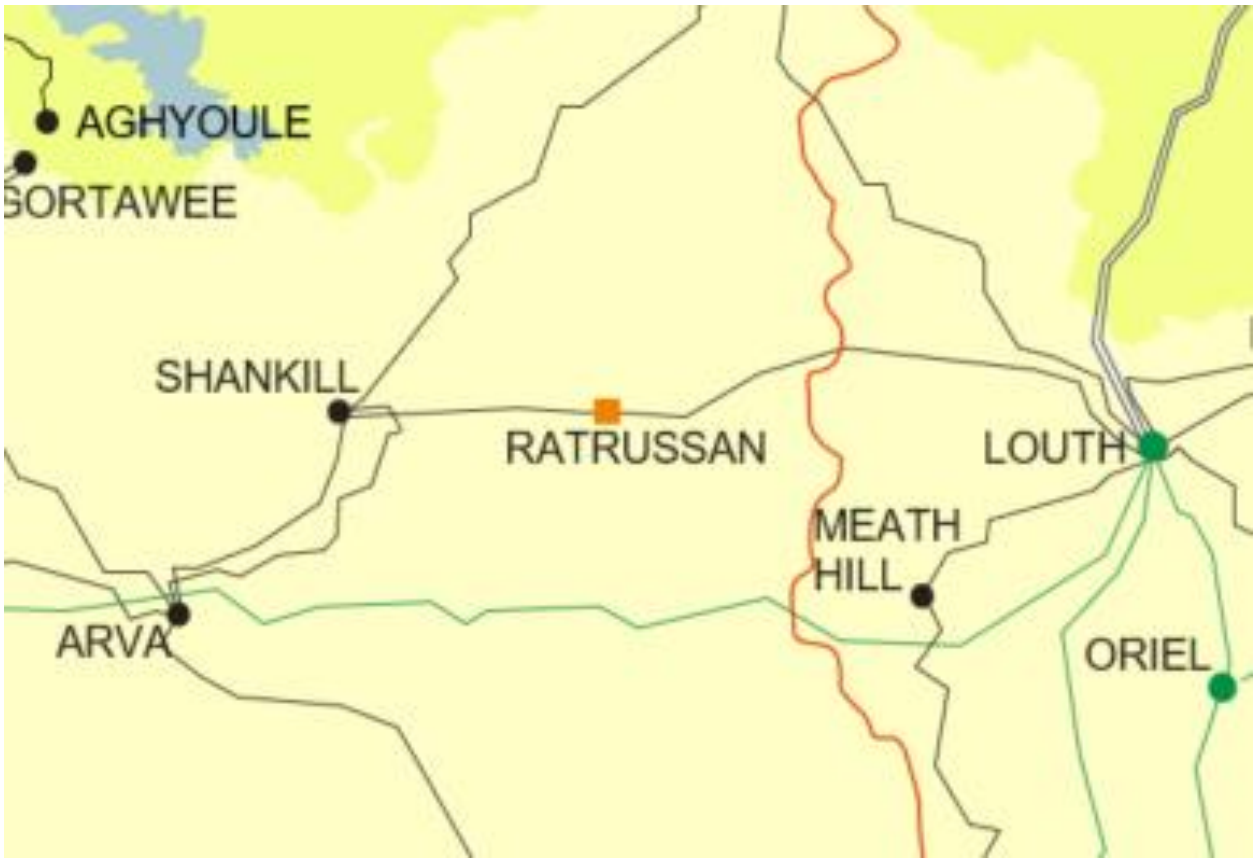

Figure 2-33 - Location of node Ratrussan

Generator	SO	Capacity	Type	Status
Mountain Lodge (1)	TSO	24.8	wind priority	connected
Ratrussan (1a)	TSO	48.0	wind priority	connected
Mountain Lodge (3)	TSO	5.82	wind priority	connected

Table 2-49 - Generation Included in Study for Node Ratrussan

The wind priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	79	79	79				
Installed Capacity (MW)	2029	79	79	79	79			
Installed Capacity (MW)	FG			79		79	79	79
Available Energy (GWh)	2027	246	246	246				
Available Energy (GWh)	2029	246	246	246	246			
Available Energy (GWh)	FG			246		246	246	246
Generation (GWh)	2027	237	213	204				
Generation (GWh)	2029	245	242	238	235			
Generation (GWh)	FG			244		239	236	234
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	7 %				
Curtailment (%)	2029	0 %	2 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	4 %	13 %	17 %				
Total Dispatch Down (%)	2029	0 %	2 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-50 - Surplus, Curtailment and Constraint for Wind priority for Node Ratrussan

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	79	
Installed Capacity (MW)	2029 (pro-rata)	79	
Installed Capacity (MW)	FG (pro-rata)		79
Available Energy (GWh)	2027 (GF)	246	
Available Energy (GWh)	2029 (pro-rata)	246	
Available Energy (GWh)	FG (pro-rata)		246
Generation (GWh)	2027 (GF)	236	
Generation (GWh)	2029 (pro-rata)	230	
Generation (GWh)	FG (pro-rata)		234
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		5 %

Table 2-51 - Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Ratrussan

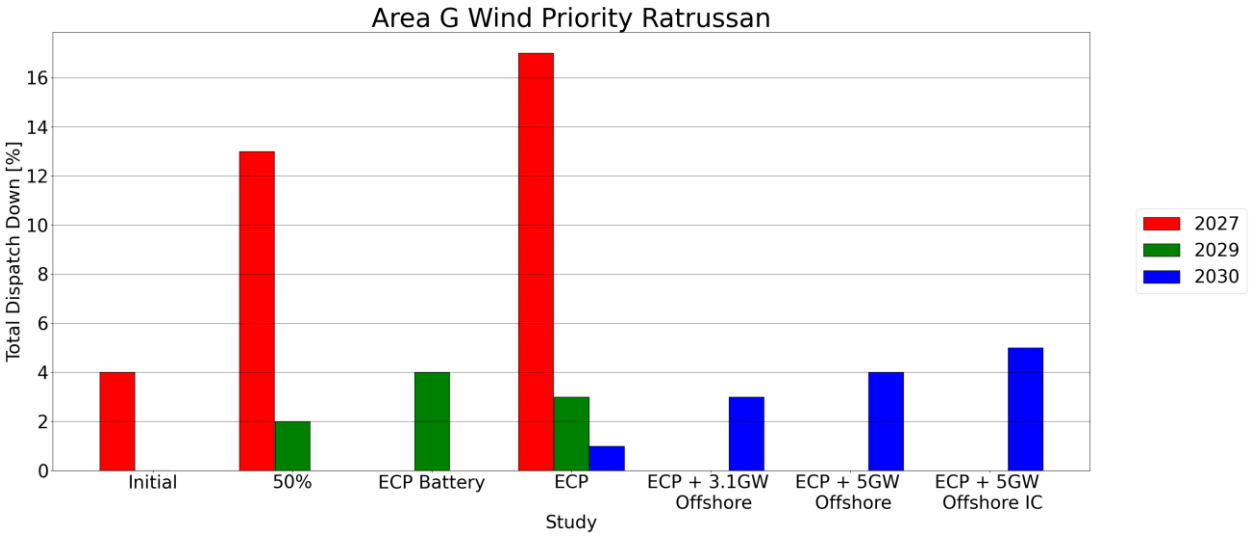

Figure 2-34 - Total Dispatch Down for Wind priority for Node Ratrussan

2.16 Ricetown

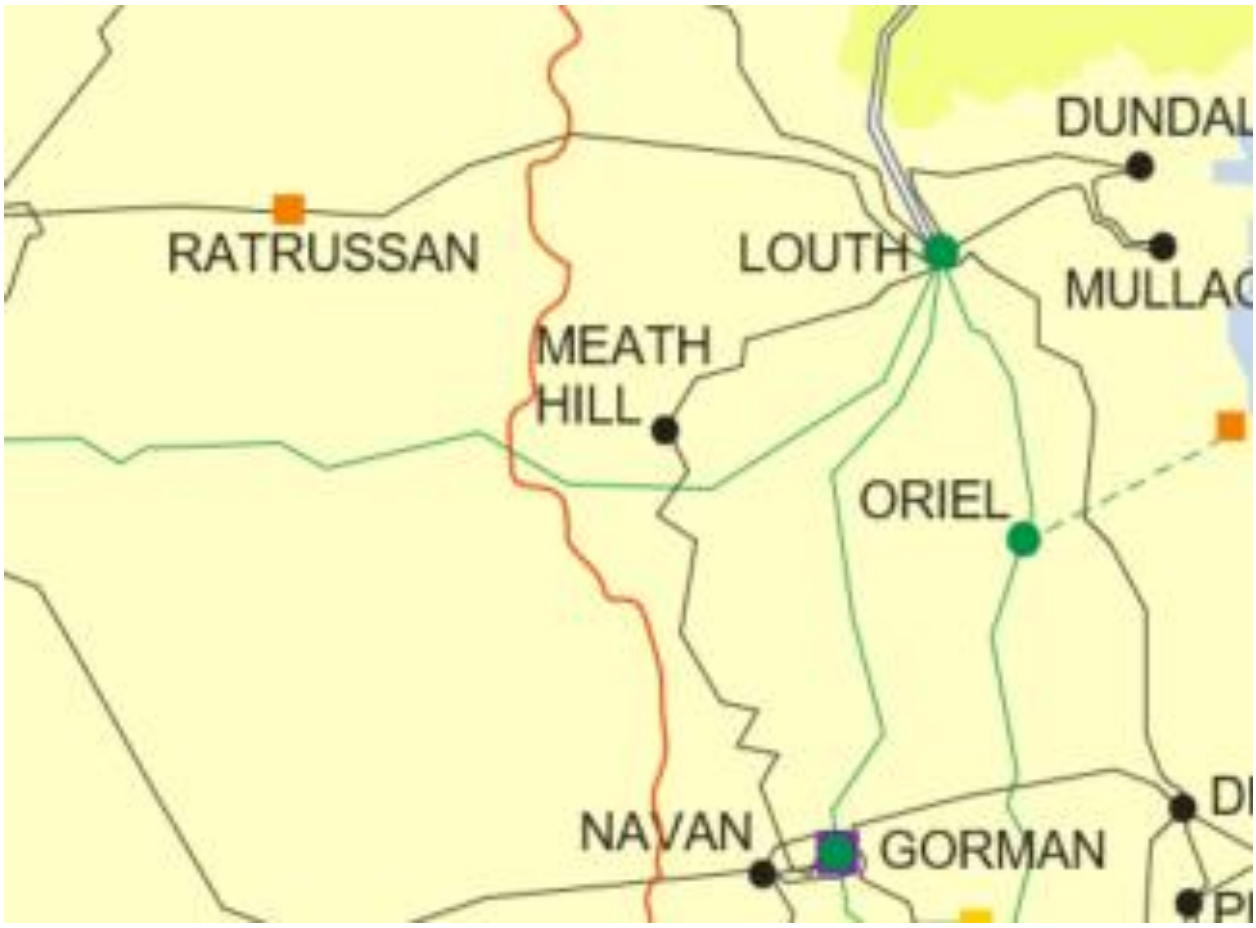

Figure 2-35 - Location of node Ricetown

Generator	SO	Capacity	Type	Status
Mill Farm Solar	TSO	63.0	solar not priority	due to connect

Table 2-52 - Generation Included in Study for Node Ricetown

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		32	63				
Installed Capacity (MW)	2029		32	63	63			
Installed Capacity (MW)	FG			63		63	63	63
Available Energy (GWh)	2027		40	81				
Available Energy (GWh)	2029		40	81	81			
Available Energy (GWh)	FG			81		81	81	81
Generation (GWh)	2027		36	63				
Generation (GWh)	2029		38	71	63			
Generation (GWh)	FG			73		70	67	62
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027		11 %	21 %				
Total Dispatch Down (%)	2029		6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 2-53 - Surplus, Curtailment and Constraint for Solar non-priority for Node Ricetown

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	32	
Installed Capacity (MW)	2029 (pro-rata)	32	
Installed Capacity (MW)	FG (pro-rata)		63
Available Energy (GWh)	2027 (GF)	40	
Available Energy (GWh)	2029 (pro-rata)	40	
Available Energy (GWh)	FG (pro-rata)		81
Generation (GWh)	2027 (GF)	36	
Generation (GWh)	2029 (pro-rata)	38	
Generation (GWh)	FG (pro-rata)		70
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 2-54 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Ricetown

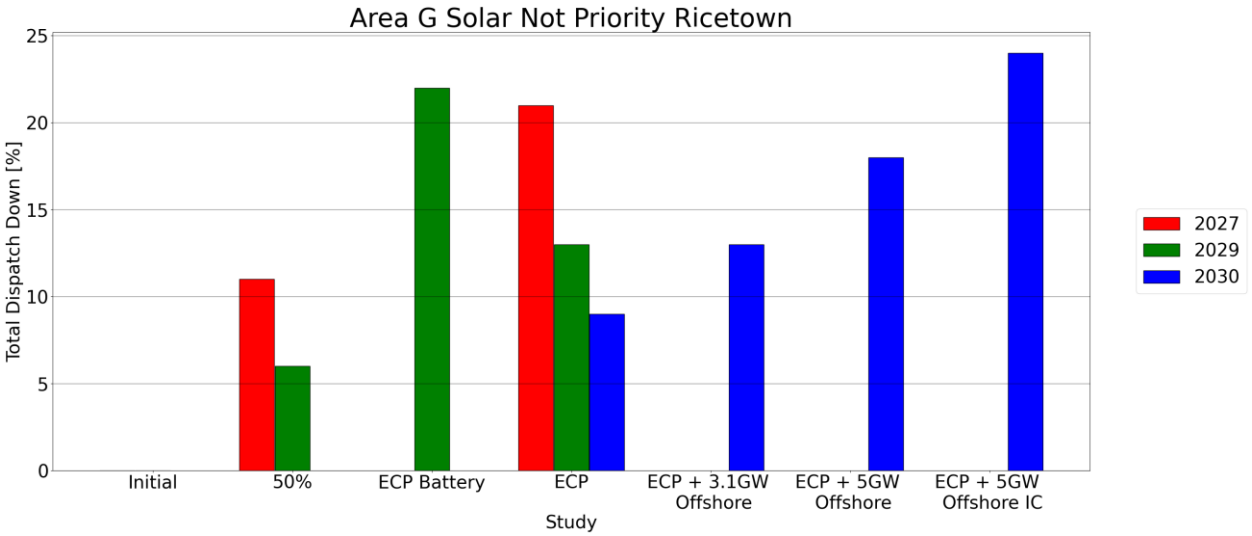

Figure 2-36 - Total Dispatch Down for Solar not priority for Node Ricetown

2.17 Shankill

Figure 2-37 - Location of node Shankill

Generator	SO	Capacity	Type	Status
Carrickallen Wind Farm	DSO	22.0	wind priority	connected
Mountain Lodge (2)	DSO	3.0	wind uncontrolled	connected
Liffey Autoproduction Project	DSO	1.6	wind uncontrolled	connected
Liffey Autoproduction Project (extension)	DSO	1.417	wind uncontrolled	connected
Carrickabane Solar Farm	DSO	4.0	solar not priority	due to connect
Drumman Solar Farm	DSO	7.0	solar not priority	due to connect
Lismeen Solar Farm	DSO	8.0	solar not priority	due to connect

Table 2-55 - Generation Included in Study for Node Shankill

The solar not priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	4	12	19				
Installed Capacity (MW)	2029	4	12	19	19			
Installed Capacity (MW)	FG			19		19	19	19
Available Energy (GWh)	2027	5	15	24				
Available Energy (GWh)	2029	5	15	24	24			
Available Energy (GWh)	FG			24		24	24	24
Generation (GWh)	2027	5	13	19				
Generation (GWh)	2029	5	14	21	19			
Generation (GWh)	FG			22		21	20	19
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	15 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	1 %	3 %	3 %				
Constraint (%)	2029	1 %	1 %	1 %	2 %			
Constraint (%)	FG			3 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	2 %	11 %	21 %				
Total Dispatch Down (%)	2029	1 %	6 %	13 %	22 %			
Total Dispatch Down (%)	FG			9 %		13 %	18 %	24 %

Table 2-56 - Surplus, Curtailment and Constraint for Solar non-priority for Node Shankill

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	12	
Installed Capacity (MW)	2029 (pro-rata)	12	
Installed Capacity (MW)	FG (pro-rata)		19
Available Energy (GWh)	2027 (GF)	15	
Available Energy (GWh)	2029 (pro-rata)	15	
Available Energy (GWh)	FG (pro-rata)		24
Generation (GWh)	2027 (GF)	13	
Generation (GWh)	2029 (pro-rata)	14	
Generation (GWh)	FG (pro-rata)		21
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	3 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	11 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		13 %

Table 2-57 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Shankill

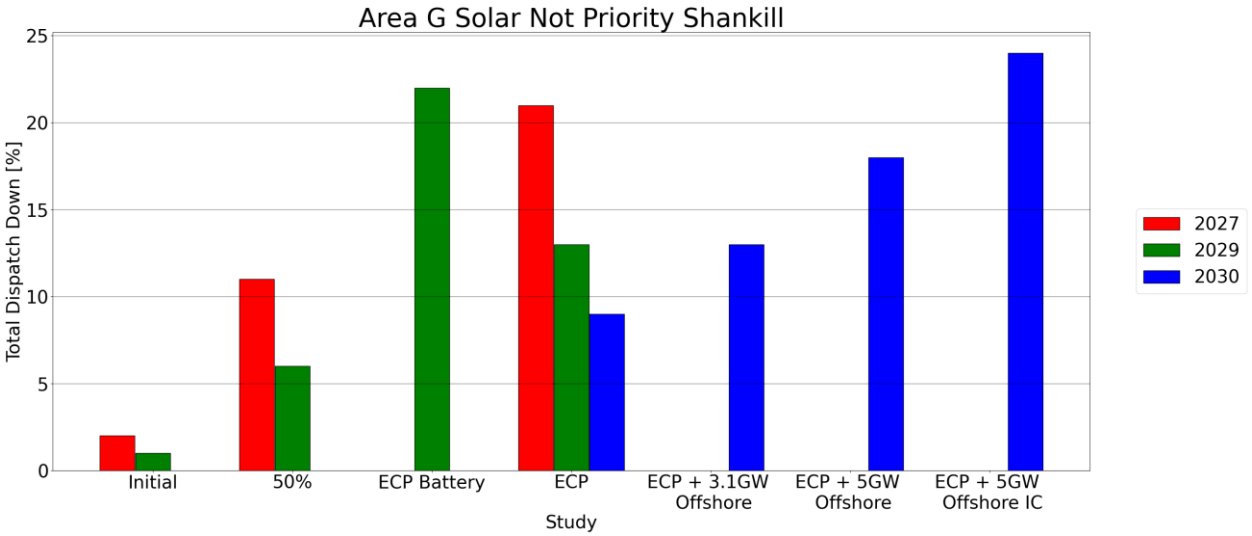

Figure 2-38 - Total Dispatch Down for Solar not priority for Node Shankill

The wind priority data is given in the following table.

Area G	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	22	22	22				
Installed Capacity (MW)	2029	22	22	22	22			
Installed Capacity (MW)	FG			22		22	22	22
Available Energy (GWh)	2027	69	69	69				
Available Energy (GWh)	2029	69	69	69	69			
Available Energy (GWh)	FG			69		69	69	69
Generation (GWh)	2027	66	60	57				
Generation (GWh)	2029	69	68	66	66			
Generation (GWh)	FG			68		67	66	65
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	7 %				
Curtailment (%)	2029	0 %	2 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	2 %	9 %	10 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	4 %	13 %	17 %				
Total Dispatch Down (%)	2029	0 %	2 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-58 - Surplus, Curtailment and Constraint for Wind priority for Node Shankill

Area G	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	22	
Installed Capacity (MW)	2029 (pro-rata)	22	
Installed Capacity (MW)	FG (pro-rata)		22
Available Energy (GWh)	2027 (GF)	69	
Available Energy (GWh)	2029 (pro-rata)	69	
Available Energy (GWh)	FG (pro-rata)		69
Generation (GWh)	2027 (GF)	66	
Generation (GWh)	2029 (pro-rata)	64	
Generation (GWh)	FG (pro-rata)		65
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	5 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	6 %	
Total Dispatch Down (%)	FG (pro-rata)		5 %

Table 2-59 - Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Shankill

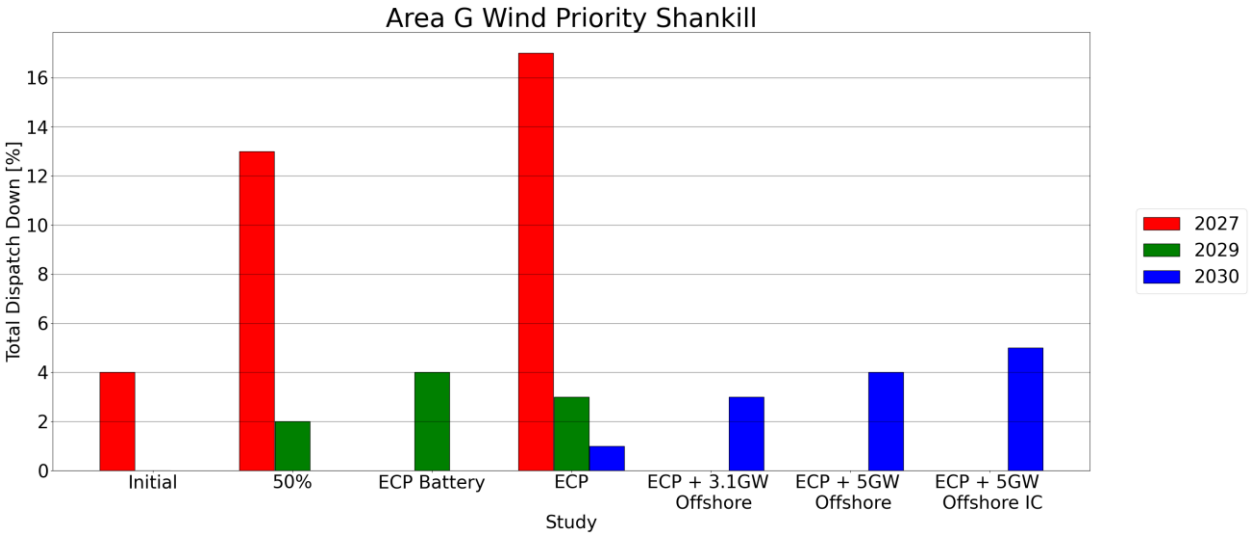

Figure 2-39 - Total Dispatch Down for Wind priority for Node Shankill