Enduring Connection Policy 2.4

Solar and Wind Constraints Report: Results for Area H2

Version 1.1

17/07/25

EirGrid

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Revision History		
Revision	**Date**	**Description**
V1.1	17.07.2025	Results have been updated to reflect the modifications made to the installed capacity at node Lodgewood within the analysis.

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Document Structure

This document is for customers wishing to see the estimated Total Dispatch Down for Area H2. 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 H2: outlines the area covered by this report. This section provides a network diagram of Area H2 and an overview of the results for Area H2.

Section 2: Area H2 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 H2.

[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 H2

1.1 Introduction

This section provides the surplus, curtailment and constraint results for Area H2 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 H2 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 H2, 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 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 H2 in the "ECP" scenario is given in Table 1-1.

Node	SO	Status	Solar	Wind
Arklow 220Kv	TSO	due to connect		400
Arklow 220Kv	TSO	due to connect		400
Arklow	DSO	due to connect	49	
Arklow	TSO	due to connect	77	
Arklow	DSO	due to connect		40
Arklow	DSO	connected		78
Ballybeg	DSO	connected	8	
Ballybeg	DSO	due to connect	8	
Ballyragget	DSO	due to connect	40	
Ballyragget	DSO	due to connect		45
Ballyragget	DSO	connected		9
Ballywater	TSO	connected		42
Banoge	DSO	connected	4	
Banoge	DSO	due to connect	4	
Carlow	DSO	due to connect	23	
Carlow	TSO	due to connect	50	
Carlow	DSO	due to connect		21
Carlow	DSO	connected		30
Carlow	DSO	connected		4
Castledockrell	TSO	connected		41
Crane	DSO	connected	9	
Crane	DSO	due to connect	1	
Crane	DSO	connected		2
Crane	DSO	connected		5
Crory	DSO	due to connect	20	
Crory	DSO	connected		44
Crory	DSO	connected		16
Effernoge	TSO	due to connect	50	
Garrintaggart	TSO	due to connect		50
Great Island 220Kv	TSO	due to connect		378
Great Island	DSO	connected	5	
Great Island	DSO	due to connect	12	
Kellis	TSO	due to connect	211	
Kellymount	TSO	due to connect		50
Kilkenny	DSO	due to connect	62	
Kilvinoge	TSO	due to connect		139
Lodgewood	TSO	due to connect	109	
Rosspile	TSO	connected	95	
Stratford	DSO	due to connect	1	
Tullabeg	TSO	connected	50	
Tullabeg	TSO	due to connect	135	
Waterford	DSO	connected	4	
Waterford	DSO	connected		14
Waterford	DSO	connected		4

Waterford	DSO	due to connect	6	
Wexford	DSO	connected	13	
Wexford	TSO	due to connect	101	
Wexford	DSO	connected		27
Wexford	DSO	connected		12
Total			1148	1851

Table 1-1 Wind and Solar Generation Summary (MW) in Area H2 for Generation Scenario "ECP"

Table 1-2 and Table 1-3 show installed solar and wind generation for Ireland and Area H2, and the available solar and wind generation for Area H2 for each generation scenario.

Solar	ECP	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Ireland (MW)	7048	7048	7048	7048
Installed Area H2 (MW)	1148	1148	1148	1148
Installed Controllable Area H2 (MW)	1148	1148	1148	1148
Available Controllable Area H2 (GWh)	1346	1346	1346	1346

Table 1-2- Installed MW and Available GWh for Area H2 - Solar

Wind	ECP	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Ireland (MW)	7358	10432	12358	12358
Installed Area H2 (MW)	675	675	1853	1853
Installed Controllable Area H2 (MW)	634	634	1812	1812
Available Controllable Area H2 (GWh)	1793	1793	6529	6529

Table 1-3 - Installed MW and Available GWh for Area H2 - Wind

1.4 Network Overview

Area H2, in the south-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 H2 and the surrounding area 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. 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 H2

Area H2 includes the assumed connection point for the Greenlink interconnector at Great Island. The area also receives connections at Arklow for future offshore wind in the offshore based scenarios. For Area H2, the dominant power flows tend to be towards the load centres on the east coast and the interconnectors. These flow patterns are relevant when seeking to understand constraint apportionment in the simulation.

Constraints in Area H2 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 may increase constraints in Area H2.

In addition to the power flowing out of Area H2, there are also power flows across or through Area H2. Renewable power from other areas will flow across the transmission network and at least some of this power will flow through Area H2.

The power flowing out of Area H2 meets and joins with power flows from other areas, as the power flows towards the demand centres and interconnectors.

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 H2 – Average Results

The Total Dispatch Down results for Area H2 are provided below in Table 1-5 to Table 1-10 and Figure 1-3 to Figure 1-5. These include the breakdown between surplus, curtailment, and constraint. The Table 1-6, Table 1-8, and Table 1-10 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 H2 (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 1-10. 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 H2 under the Future Grid scenarios and associated sensitivity case is given in Table 1-5 to Table 1-10. 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 the Area H2, the lower rating of the Arklow 220/110 kV transformer is a significant bottleneck in the area during the high-RES scenarios. Additionally, the loss of 220 kV circuits to Carrickmines or Dunstown creates additional stress to the network in this area. The Greenlink and Celtic interconnectors provide additional extraction points during high-RES scenarios. Thus, generation in Area K and H2 tries to push power towards the Dublin load centres and interconnectors through the 220 kV and 110 kV circuits. The contingencies and overloaded lines associated with the area are included in Appendix C of the ECP-2.4 Assumptions and Methodology report.

Analysis of Area H2 identified constraint subgroups for solar and wind generation combining Area H2 and Area K. The subgroup nodes are given in Table 1-4. The constraints are shared on a pro-rata basis amongst

the non-priority generators in the subgroup ahead of priority generators. The individual node level dispatch down is given in Section 2.

Subgroup	Nodes
H2 & K	Arklow
	Arklow 220 kV
	Ballybeg
	Ballyragget
	Ballywater
	Banoge
	Carlow
	Castledockrell
	Crane
	Crory
	Effernoge
	Garrintaggart
	Great Island
	Great Island 220 kV
	Kellis
	Kellymount
	Kilkenny
	Kilvinoge
	Lodgewood
	Rosspile
	Stratford
	Tullabeg
	Waterford
	Wexford

Table 1-4 Area H2 generator nodes and their subgroups

Figure 1-2 Subgroup H2 & K (subgroups outlined by blue dashed line)

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

Area H2 (H2 & K)	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	296	723	1148				
Installed Capacity (MW)	2029	296	723	1148	1148			
Installed Capacity (MW)	FG			1148		1148	1148	1148
Available Energy (GWh)	2027	348	848	1346				
Available Energy (GWh)	2029	348	848	1346	1346			
Available Energy (GWh)	FG			1346		1346	1346	1346
Generation (GWh)	2027	332	746	1045				
Generation (GWh)	2029	343	789	1141	984			
Generation (GWh)	FG			1210		1145	1083	1005
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 1-5 - Surplus, Curtailment and Constraint for Solar Non-priority in Area H2 (H2 & K)

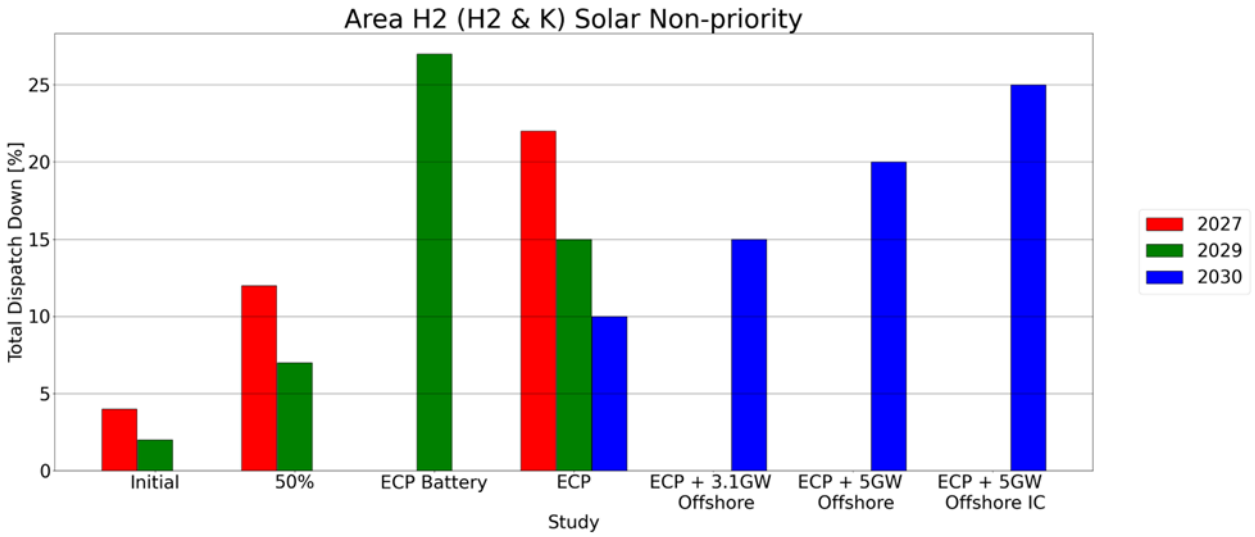

Figure 1-3 - Results Solar Non-priority Area H2 (H2 & K)

Area H2 (H2 & K)	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	723	
Installed Capacity (MW)	2029 (pro-rata)	723	
Installed Capacity (MW)	FG (pro-rata)		1148
Available Energy (GWh)	2027 (GF)	848	
Available Energy (GWh)	2029 (pro-rata)	848	
Available Energy (GWh)	FG (pro-rata)		1346
Generation (GWh)	2027 (GF)	746	
Generation (GWh)	2029 (pro-rata)	789	
Generation (GWh)	FG (pro-rata)		1145
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 1-6 - Surplus, Curtailment and Constraint for Solar Non-priority with Sensitivity in Area H2 (H2 & K)

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

Area H2 (H2 & K)	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	40	192	344				
Installed Capacity (MW)	2029	40	192	344	344			
Installed Capacity (MW)	FG			344		344	1522	1522
Available Energy (GWh)	2027	113	544	974				
Available Energy (GWh)	2029	113	544	974	974			
Available Energy (GWh)	FG			974		974	5711	5711
Generation (GWh)	2027	107	481	781				
Generation (GWh)	2029	102	515	886	834			
Generation (GWh)	FG			921		828	4256	3785
Surplus (%)	2027	1 %	6 %	13 %				
Surplus (%)	2029	0 %	2 %	5 %	8 %			
Surplus (%)	FG			3 %		12 %	23 %	32 %
Curtailment (%)	2027	1 %	3 %	4 %				
Curtailment (%)	2029	0 %	1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	9 %	2 %	1 %	3 %			
Constraint (%)	FG			2 %		1 %	1 %	1 %
Total Dispatch Down (%)	2027	5 %	12 %	20 %				
Total Dispatch Down (%)	2029	10 %	5 %	9 %	14 %			
Total Dispatch Down (%)	FG			6 %		15 %	27 %	35 %

Table 1-7 - Surplus, Curtailment and Constraint for Wind Non-priority in Area H2 (H2 & K)

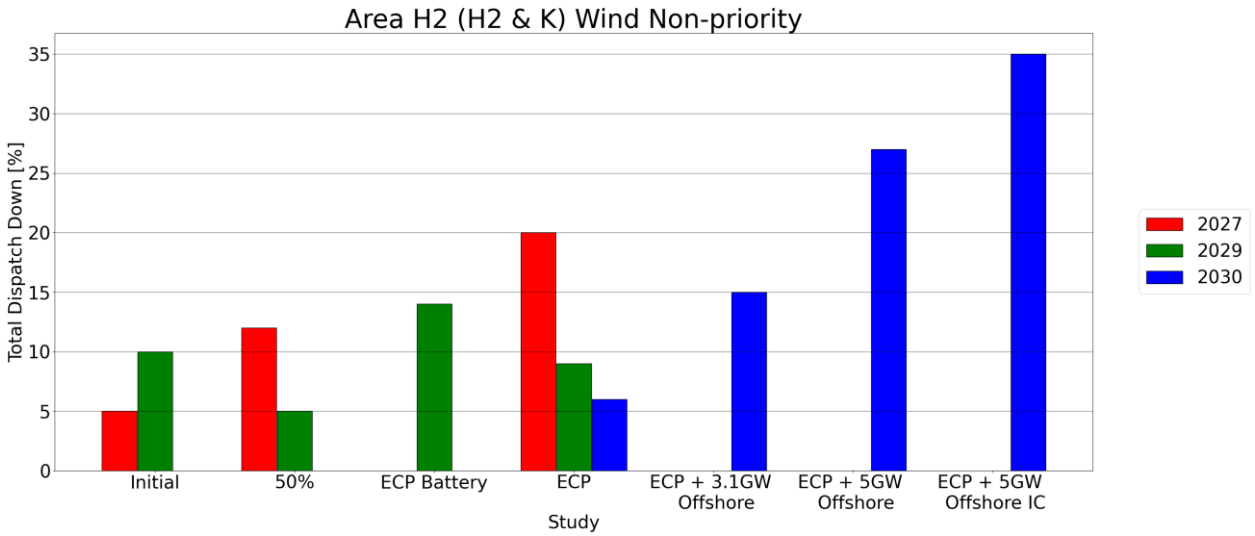

Figure 1-4 - Results Wind Non-priority Area H2 (H2 & K)

Area H2 (H2 & K)	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	192	
Installed Capacity (MW)	2029 (pro-rata)	192	
Installed Capacity (MW)	FG (pro-rata)		344
Available Energy (GWh)	2027 (GF)	544	
Available Energy (GWh)	2029 (pro-rata)	544	
Available Energy (GWh)	FG (pro-rata)		974
Generation (GWh)	2027 (GF)	463	
Generation (GWh)	2029 (pro-rata)	522	
Generation (GWh)	FG (pro-rata)		830
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		12 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	6 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	4 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 1-8 - Surplus, Curtailment and Constraint for Wind Non-priority with Sensitivity in Area H2 (H2 & K)

The wind priority data is given in the following table.

Area H2 (H2 & K)	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	289	289	289				
Installed Capacity (MW)	2029	289	289	289	289			
Installed Capacity (MW)	FG			289		289	289	289
Available Energy (GWh)	2027	818	818	818				
Available Energy (GWh)	2029	818	818	818	818			
Available Energy (GWh)	FG			818		818	818	818
Generation (GWh)	2027	781	763	742				
Generation (GWh)	2029	816	807	793	783			
Generation (GWh)	FG			812		795	786	777
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 1-9 - Surplus, Curtailment and Constraint for Wind Priority in Area H2 (H2 & K)

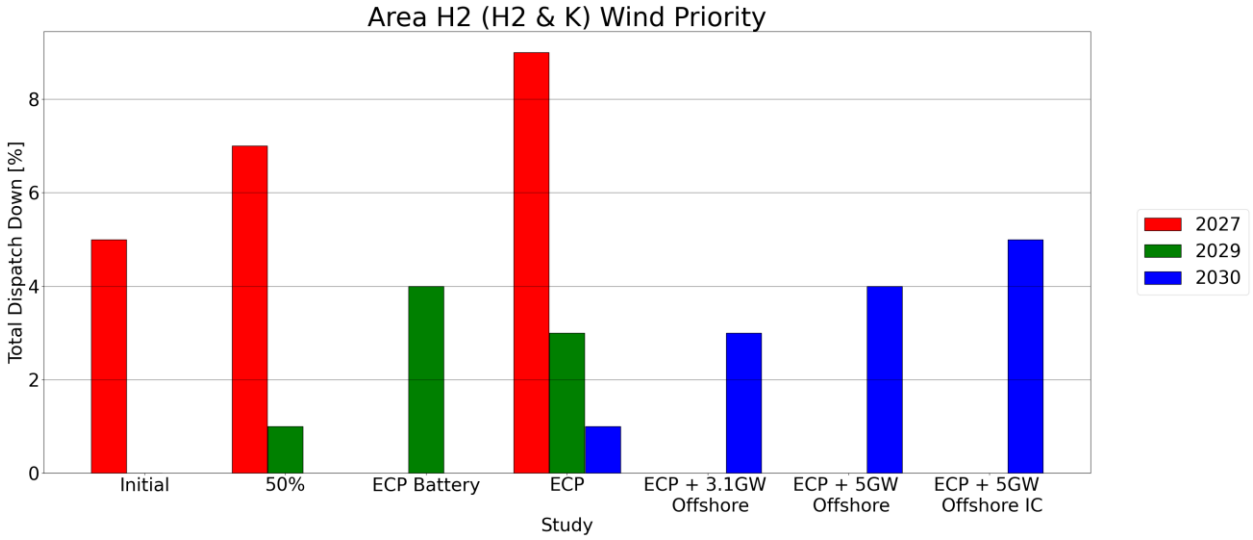

Figure 1-5 - Results Wind Priority Area H2 (H2 & K)

Area H2 (H2 & K)	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	289	
Installed Capacity (MW)	2029 (pro-rata)	289	
Installed Capacity (MW)	FG (pro-rata)		289
Available Energy (GWh)	2027 (GF)	818	
Available Energy (GWh)	2029 (pro-rata)	818	
Available Energy (GWh)	FG (pro-rata)		818
Generation (GWh)	2027 (GF)	787	
Generation (GWh)	2029 (pro-rata)	797	
Generation (GWh)	FG (pro-rata)		792
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 1-10 - Surplus, Curtailment and Constraint for Wind Priority with Sensitivity in Area H2 (H2 & K)

1.7 Conclusion – Results for Area H2

This section provides an overview of the estimated surplus, curtailment and constraint values for Area H2 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 H2.

2 Area H2 Node Results

This section presents the results of the modelling analysis for Area H2. The levels of surplus, curtailment and constraint that controllable solar and wind generators in Area H2 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 H2

2.1 Arklow

Figure 2-2 - Location of node Arklow

Generator	SO	Capacity	Type	Status
Arklow Bank (1)	DSO	25.2	wind priority	connected
Ballycumber (1)	DSO	18.0	wind priority	connected
Raheenleagh (1)	DSO	35.2	wind priority	connected
Knockadosan Solar (formerly Springfarm Wind Farm)	DSO	6.0	solar not priority	due to connect
Templerainey East Solar Farm (Ballycooleen)	DSO	4.0	solar not priority	due to connect
Ballymanus Wind Farm	DSO	39.99	wind not priority	due to connect
Coolnagloose Community Solar Farm	DSO	0.85	solar not priority	due to connect
North Arklow Solar	TSO	47.0	solar not priority	due to connect
Coolboy Solar Farm	DSO	8.8	solar not priority	due to connect
Johnstown North PV	DSO	22.0	solar not priority	due to connect
Ballymoney PV	DSO	7.6	solar not priority	due to connect
Templemichael Solar Plus Storage Facility	TSO	30.0	solar not priority	due to connect

Table 2-1 Generation Included in Study for Node Arklow

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	10	68	126				
Installed Capacity (MW)	2029	10	68	126	126			
Installed Capacity (MW)	FG			126		126	126	126
Available Energy (GWh)	2027	12	80	148				
Available Energy (GWh)	2029	12	80	148	148			
Available Energy (GWh)	FG			148		148	148	148
Generation (GWh)	2027	11	70	115				
Generation (GWh)	2029	12	74	125	108			
Generation (GWh)	FG			133		126	119	110
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

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

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	68	
Installed Capacity (MW)	2029 (pro-rata)	68	
Installed Capacity (MW)	FG (pro-rata)		126
Available Energy (GWh)	2027 (GF)	80	
Available Energy (GWh)	2029 (pro-rata)	80	
Available Energy (GWh)	FG (pro-rata)		148
Generation (GWh)	2027 (GF)	70	
Generation (GWh)	2029 (pro-rata)	74	
Generation (GWh)	FG (pro-rata)		126
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

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

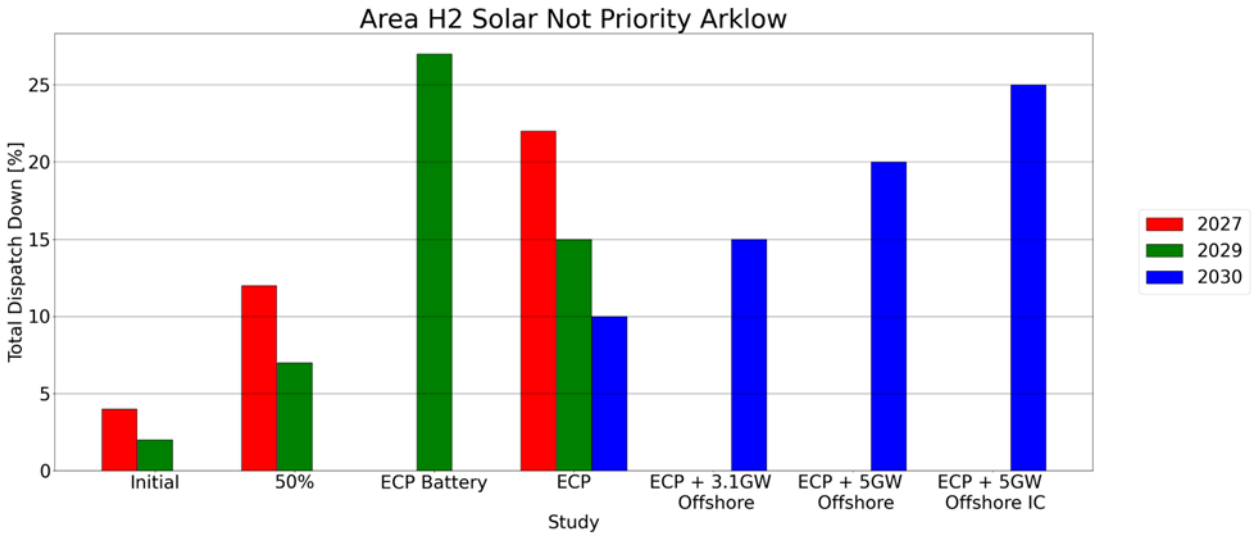

Figure 2-3 - Total Dispatch Down for Solar not priority for Node Arklow

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	40	40	40				
Installed Capacity (MW)	2029	40	40	40	40			
Installed Capacity (MW)	FG			40		40	40	40
Available Energy (GWh)	2027	113	113	113				
Available Energy (GWh)	2029	113	113	113	113			
Available Energy (GWh)	FG			113		113	113	113
Generation (GWh)	2027	107	100	91				
Generation (GWh)	2029	102	107	103	97			
Generation (GWh)	FG			107		96	82	72
Surplus (%)	2027	1 %	6 %	13 %				
Surplus (%)	2029	0 %	2 %	5 %	8 %			
Surplus (%)	FG			3 %		12 %	24 %	33 %
Curtailment (%)	2027	1 %	3 %	4 %				
Curtailment (%)	2029	0 %	1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	9 %	2 %	1 %	3 %			
Constraint (%)	FG			2 %		1 %	1 %	1 %
Total Dispatch Down (%)	2027	5 %	12 %	20 %				
Total Dispatch Down (%)	2029	10 %	5 %	9 %	14 %			
Total Dispatch Down (%)	FG			6 %		15 %	28 %	36 %

Table 2-4 Surplus, Curtailment and Constraint for Wind non-priority for Node Arklow

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	40	
Installed Capacity (MW)	2029 (pro-rata)	40	
Installed Capacity (MW)	FG (pro-rata)		40
Available Energy (GWh)	2027 (GF)	113	
Available Energy (GWh)	2029 (pro-rata)	113	
Available Energy (GWh)	FG (pro-rata)		113
Generation (GWh)	2027 (GF)	96	
Generation (GWh)	2029 (pro-rata)	109	
Generation (GWh)	FG (pro-rata)		96
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		12 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	6 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	4 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-5 Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Arklow

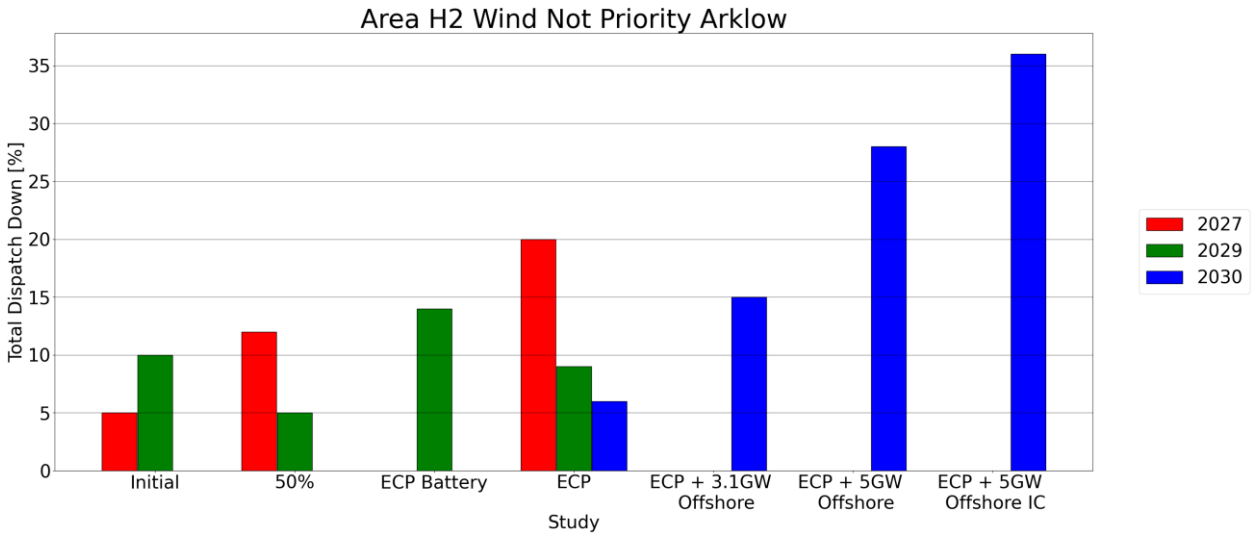

Figure 2-4- Total Dispatch Down for Wind not priority for Node Arklow

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	78	78	78				
Installed Capacity (MW)	2029	78	78	78	78			
Installed Capacity (MW)	FG			78		78	78	78
Available Energy (GWh)	2027	222	222	222				
Available Energy (GWh)	2029	222	222	222	222			
Available Energy (GWh)	FG			222		222	222	222
Generation (GWh)	2027	212	207	201				
Generation (GWh)	2029	221	219	215	212			
Generation (GWh)	FG			220		216	213	211
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-6 Surplus, Curtailment and Constraint for Wind priority for Node Arklow

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	78	
Installed Capacity (MW)	2029 (pro-rata)	78	
Installed Capacity (MW)	FG (pro-rata)		78
Available Energy (GWh)	2027 (GF)	222	
Available Energy (GWh)	2029 (pro-rata)	222	
Available Energy (GWh)	FG (pro-rata)		222
Generation (GWh)	2027 (GF)	213	
Generation (GWh)	2029 (pro-rata)	216	
Generation (GWh)	FG (pro-rata)		215
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-7 Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Arklow

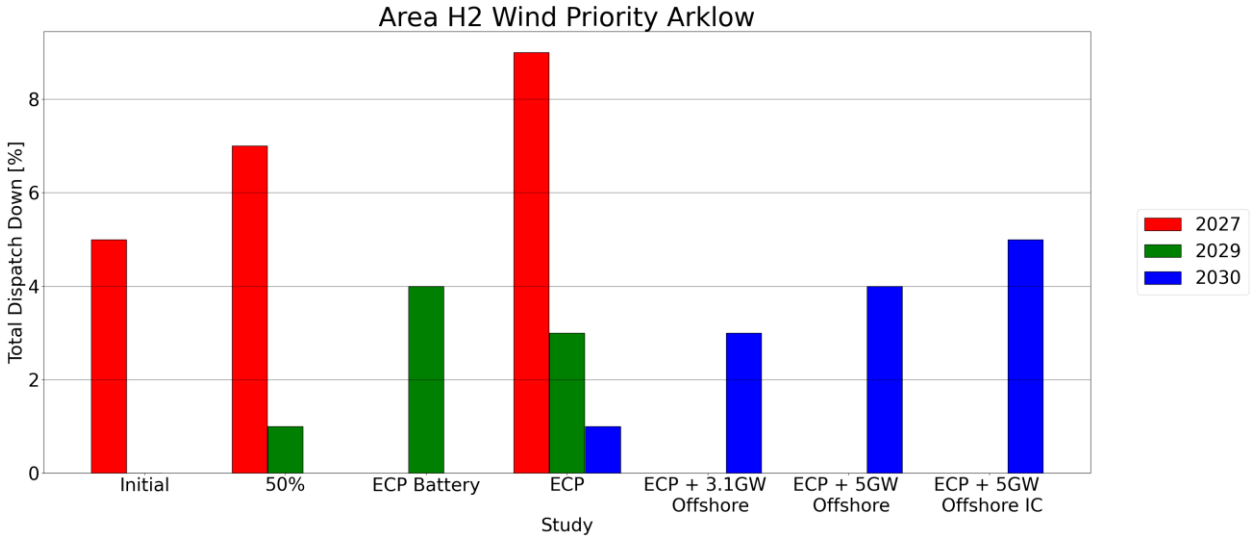

Figure 2-5 -Total Dispatch Down for Wind priority for Node Arklow

2.2 Arklow 220kv

Figure 2-6- Location of node Arklow 220kv

Generator	SO	Capacity	Type	Status
Arklow Bank Phase 2 A	TSO	400.0	wind not priority	due to connect
Arklow Bank Phase 2 B	TSO	400.0	wind not priority	due to connect

Table 2-8 Generation Included in Study for Node Arklow 220kv

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

Area H2	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						800	800
Available Energy (GWh)	2027							
Available Energy (GWh)	2029							
Available Energy (GWh)	FG						3217	3217
Generation (GWh)	2027							
Generation (GWh)	2029							
Generation (GWh)	FG						2411	2149
Surplus (%)	2027							
Surplus (%)	2029							
Surplus (%)	FG						21 %	30 %
Curtailment (%)	2027							
Curtailment (%)	2029							
Curtailment (%)	FG						2 %	3 %
Constraint (%)	2027							
Constraint (%)	2029							
Constraint (%)	FG						1 %	1 %
Total Dispatch Down (%)	2027							
Total Dispatch Down (%)	2029							
Total Dispatch Down (%)	FG						25 %	33 %

Table 2-9 Surplus, Curtailment and Constraint for Wind non-priority for Node Arklow 220kv

Area H2	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 2-10 Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Arklow 220kv

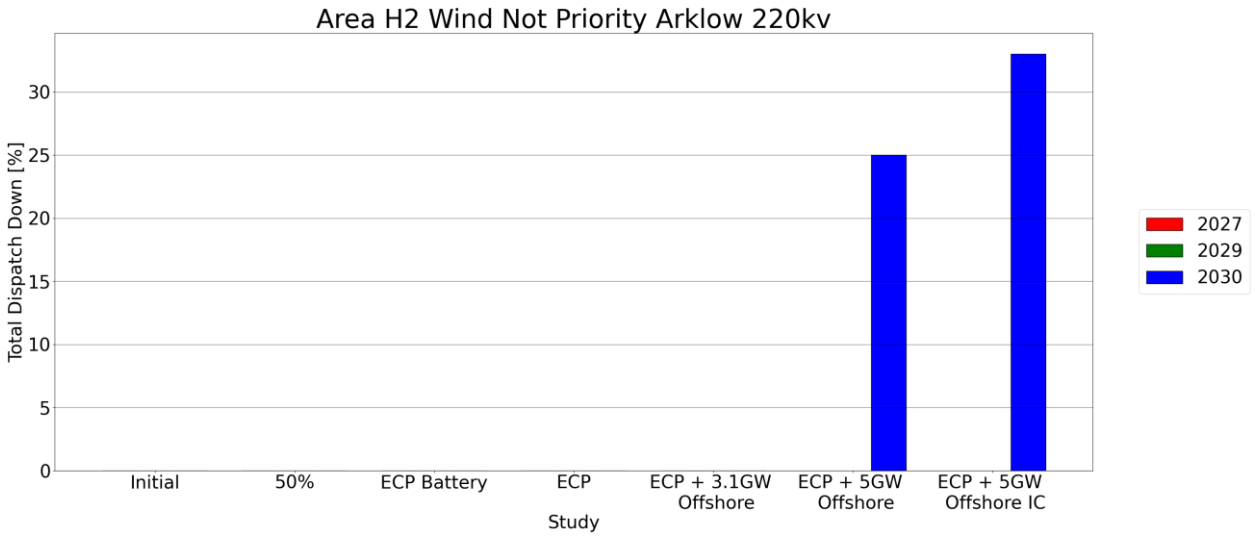

Figure 2-7 - Total Dispatch Down for Wind not priority for Node Arklow 220kv

2.3 Ballybeg

Figure 2-8- Location of node Ballybeg

Generator	SO	Capacity	Type	Status
Millvale PV	DSO	8.0	solar not priority	connected
Ballinaclough Solar Farm	DSO	8.5	solar not priority	due to connect

Table 2-11- Generation Included in Study for Node Ballybeg

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	8	12	16				
Installed Capacity (MW)	2029	8	12	16	16			
Installed Capacity (MW)	FG			16		16	16	16
Available Energy (GWh)	2027	10	16	21				
Available Energy (GWh)	2029	10	16	21	21			
Available Energy (GWh)	FG			21		21	21	21
Generation (GWh)	2027	10	14	16				
Generation (GWh)	2029	10	15	18	15			
Generation (GWh)	FG			19		18	17	16
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	21 %
Curtailment (%)	2027	1 %	2 %	4 %				
Curtailment (%)	2029	0 %	1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	5 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	19 %	25 %

Table 2-12- Surplus, Curtailment and Constraint for Solar non-priority for Node Ballybeg

Area H2	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)		16
Available Energy (GWh)	2027 (GF)	16	
Available Energy (GWh)	2029 (pro-rata)	16	
Available Energy (GWh)	FG (pro-rata)		21
Generation (GWh)	2027 (GF)	14	
Generation (GWh)	2029 (pro-rata)	15	
Generation (GWh)	FG (pro-rata)		18
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)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-13- Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Ballybeg

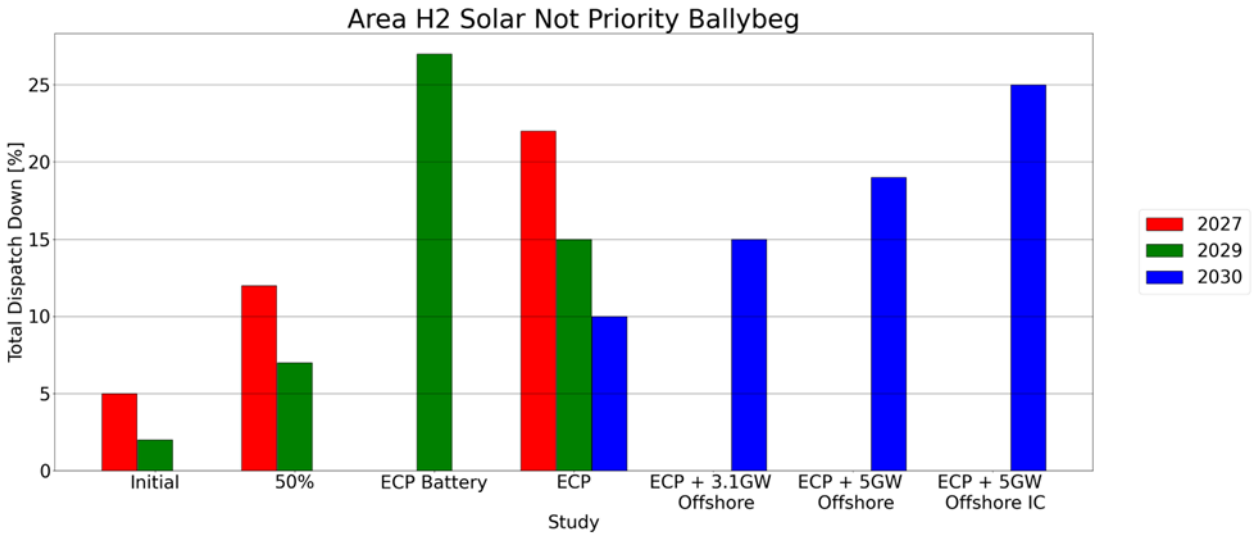

Figure 2-9 - Total Dispatch Down for Solar not priority for Node Ballybeg

2.4 Ballyragget

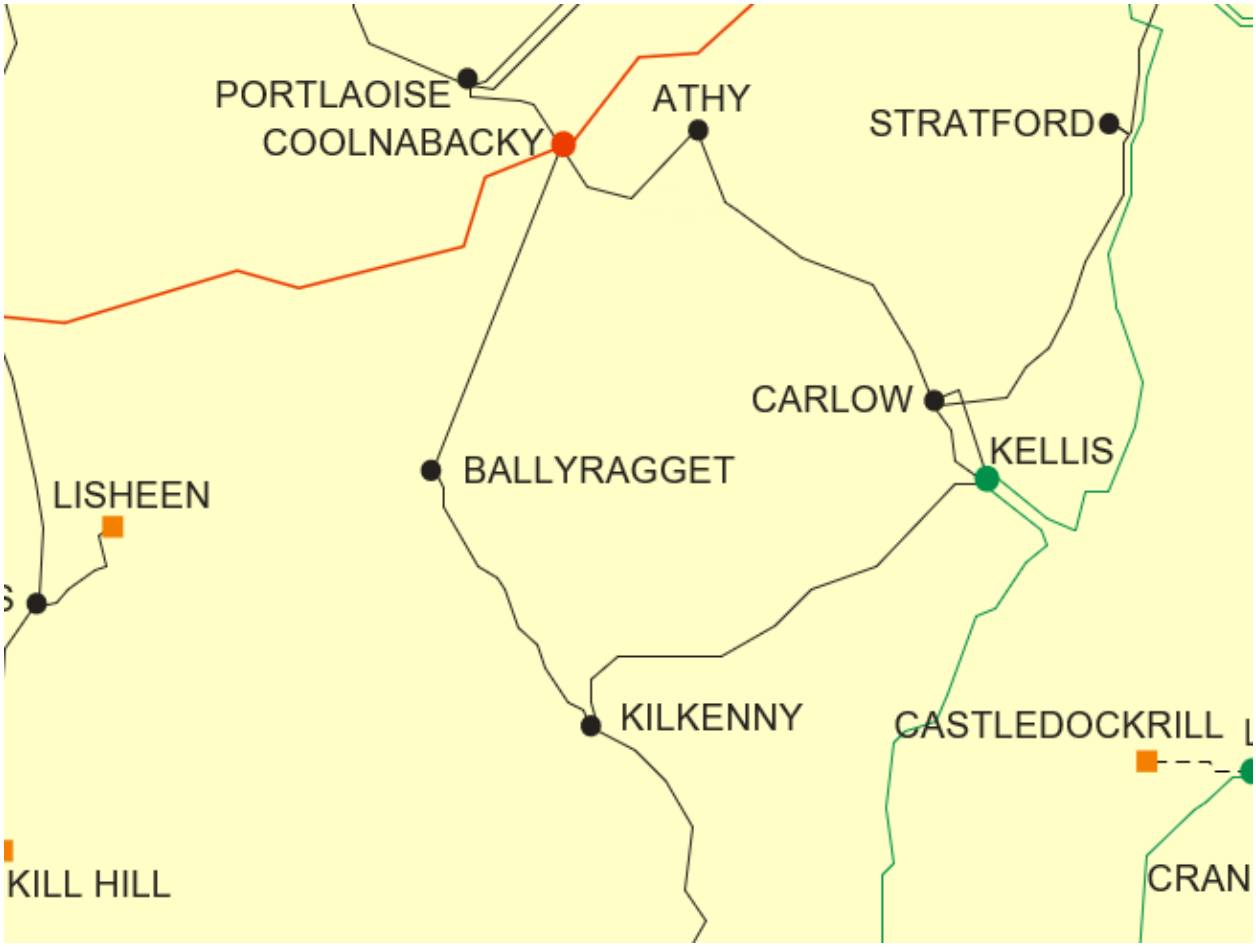

Figure 2-10 - Location of node Ballyragget

Generator	SO	Capacity	Type	Status
Lisdowney (1)	DSO	9.2	wind priority	connected
Loan PV	DSO	4.99	solar not priority	due to connect
Parksgrove solar	DSO	35.0	solar not priority	due to connect
Farranrory Wind Farm	DSO	45.0	wind not priority	due to connect

Figure 2-11 Generation Included in Study for Node Ballyragget

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	40	40	40				
Installed Capacity (MW)	2029	40	40	40	40			
Installed Capacity (MW)	FG			40		40	40	40
Available Energy (GWh)	2027	47	47	47				
Available Energy (GWh)	2029	47	47	47	47			
Available Energy (GWh)	FG			47		47	47	47
Generation (GWh)	2027	45	41	36				
Generation (GWh)	2029	46	44	40	34			
Generation (GWh)	FG			42		40	38	35
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-14 - Surplus, Curtailment and Constraint for Solar non-priority for Node Ballyragget

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	40	
Installed Capacity (MW)	2029 (pro-rata)	40	
Installed Capacity (MW)	FG (pro-rata)		40
Available Energy (GWh)	2027 (GF)	47	
Available Energy (GWh)	2029 (pro-rata)	47	
Available Energy (GWh)	FG (pro-rata)		47
Generation (GWh)	2027 (GF)	41	
Generation (GWh)	2029 (pro-rata)	44	
Generation (GWh)	FG (pro-rata)		40
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-15- Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Ballyragget

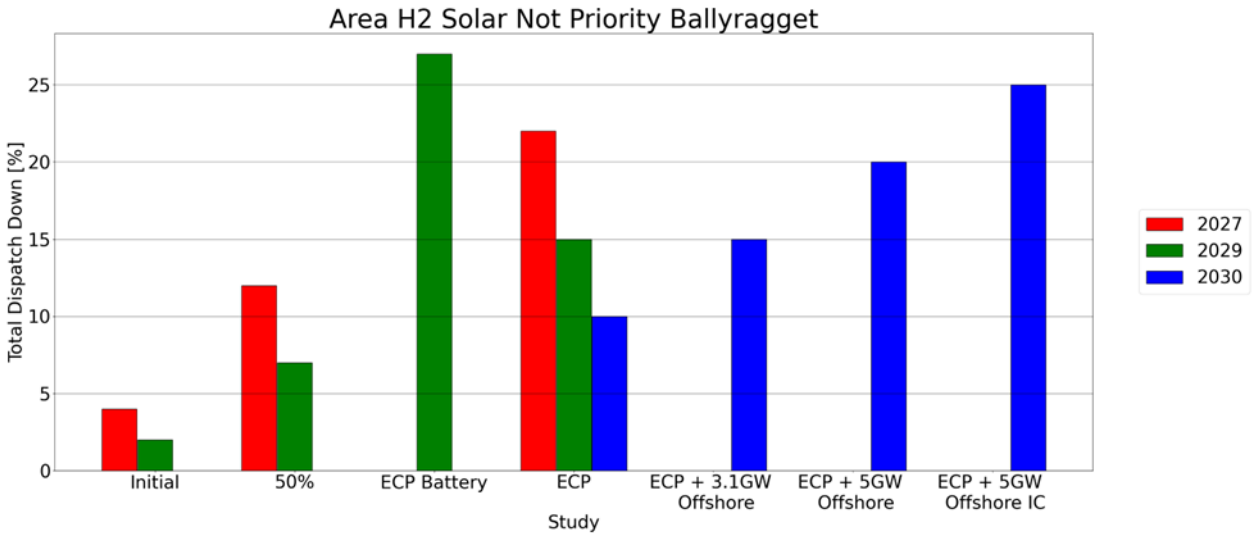

Figure 2-12- Total Dispatch Down for Solar not priority for Node Ballyragget

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		22	45				
Installed Capacity (MW)	2029		22	45	45			
Installed Capacity (MW)	FG			45		45	45	45
Available Energy (GWh)	2027		64	127				
Available Energy (GWh)	2029		64	127	127			
Available Energy (GWh)	FG			127		127	127	127
Generation (GWh)	2027		56	102				
Generation (GWh)	2029		60	116	109			
Generation (GWh)	FG			120		108	92	81
Surplus (%)	2027		6 %	13 %				
Surplus (%)	2029		2 %	5 %	8 %			
Surplus (%)	FG			3 %		12 %	24 %	33 %
Curtailment (%)	2027		3 %	4 %				
Curtailment (%)	2029		1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		2 %	1 %	3 %			
Constraint (%)	FG			2 %		1 %	1 %	1 %
Total Dispatch Down (%)	2027		12 %	20 %				
Total Dispatch Down (%)	2029		5 %	9 %	14 %			
Total Dispatch Down (%)	FG			6 %		15 %	28 %	36 %

Table 2-16 Surplus, Curtailment and Constraint for Wind non-priority for Node Ballyragget

Area H2	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)		45
Available Energy (GWh)	2027 (GF)	64	
Available Energy (GWh)	2029 (pro-rata)	64	
Available Energy (GWh)	FG (pro-rata)		127
Generation (GWh)	2027 (GF)	54	
Generation (GWh)	2029 (pro-rata)	61	
Generation (GWh)	FG (pro-rata)		108
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		12 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	6 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	4 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-17 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Ballyragget

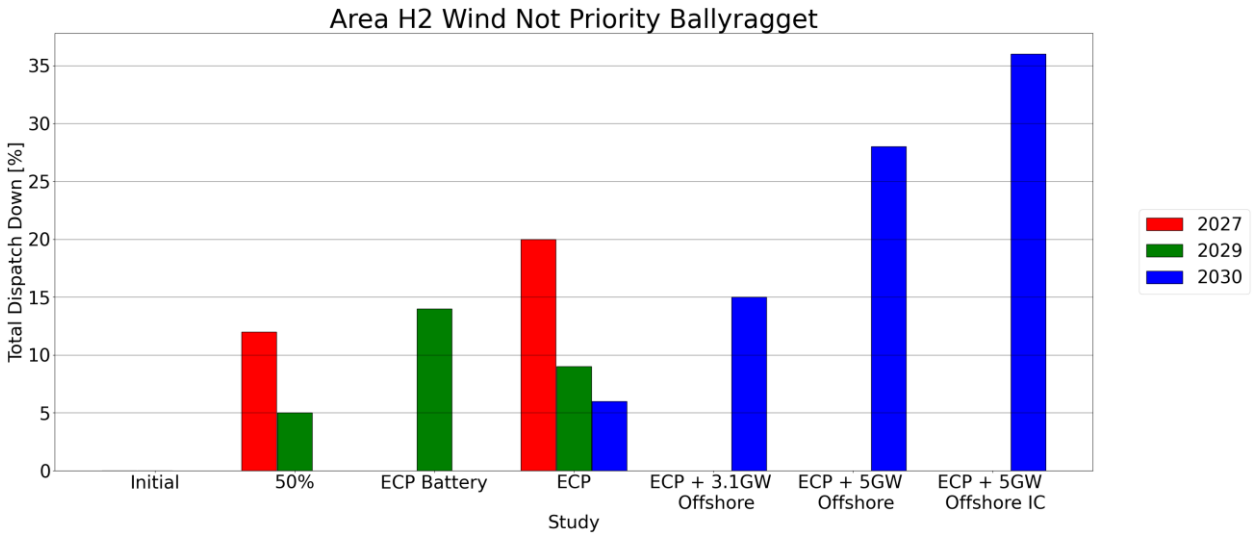

Figure 2-13- Total Dispatch Down for Wind not priority for Node Ballyragget

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	9	9	9				
Installed Capacity (MW)	2029	9	9	9	9			
Installed Capacity (MW)	FG			9		9	9	9
Available Energy (GWh)	2027	26	26	26				
Available Energy (GWh)	2029	26	26	26	26			
Available Energy (GWh)	FG			26		26	26	26
Generation (GWh)	2027	25	24	24				
Generation (GWh)	2029	26	26	25	25			
Generation (GWh)	FG			26		25	25	25
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-18 - Surplus, Curtailment and Constraint for Wind priority for Node Ballyragget

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	9	
Installed Capacity (MW)	2029 (pro-rata)	9	
Installed Capacity (MW)	FG (pro-rata)		9
Available Energy (GWh)	2027 (GF)	26	
Available Energy (GWh)	2029 (pro-rata)	26	
Available Energy (GWh)	FG (pro-rata)		26
Generation (GWh)	2027 (GF)	25	
Generation (GWh)	2029 (pro-rata)	25	
Generation (GWh)	FG (pro-rata)		25
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-19- Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Ballyragget

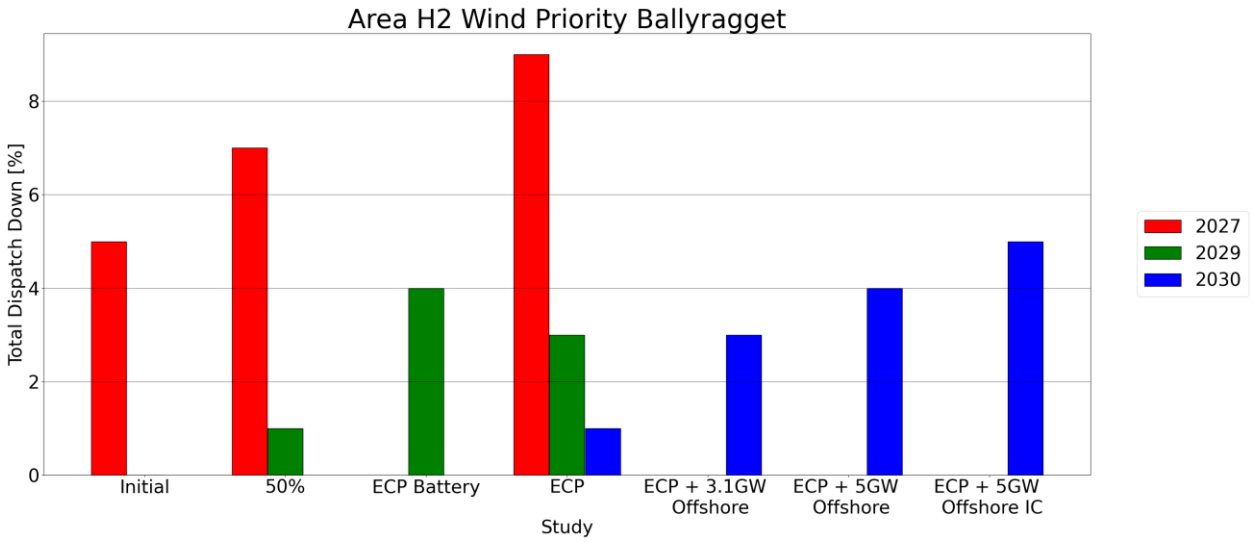

Figure 2-14 - Total Dispatch Down for Wind priority for Node Ballyragget

2.5 Ballywater

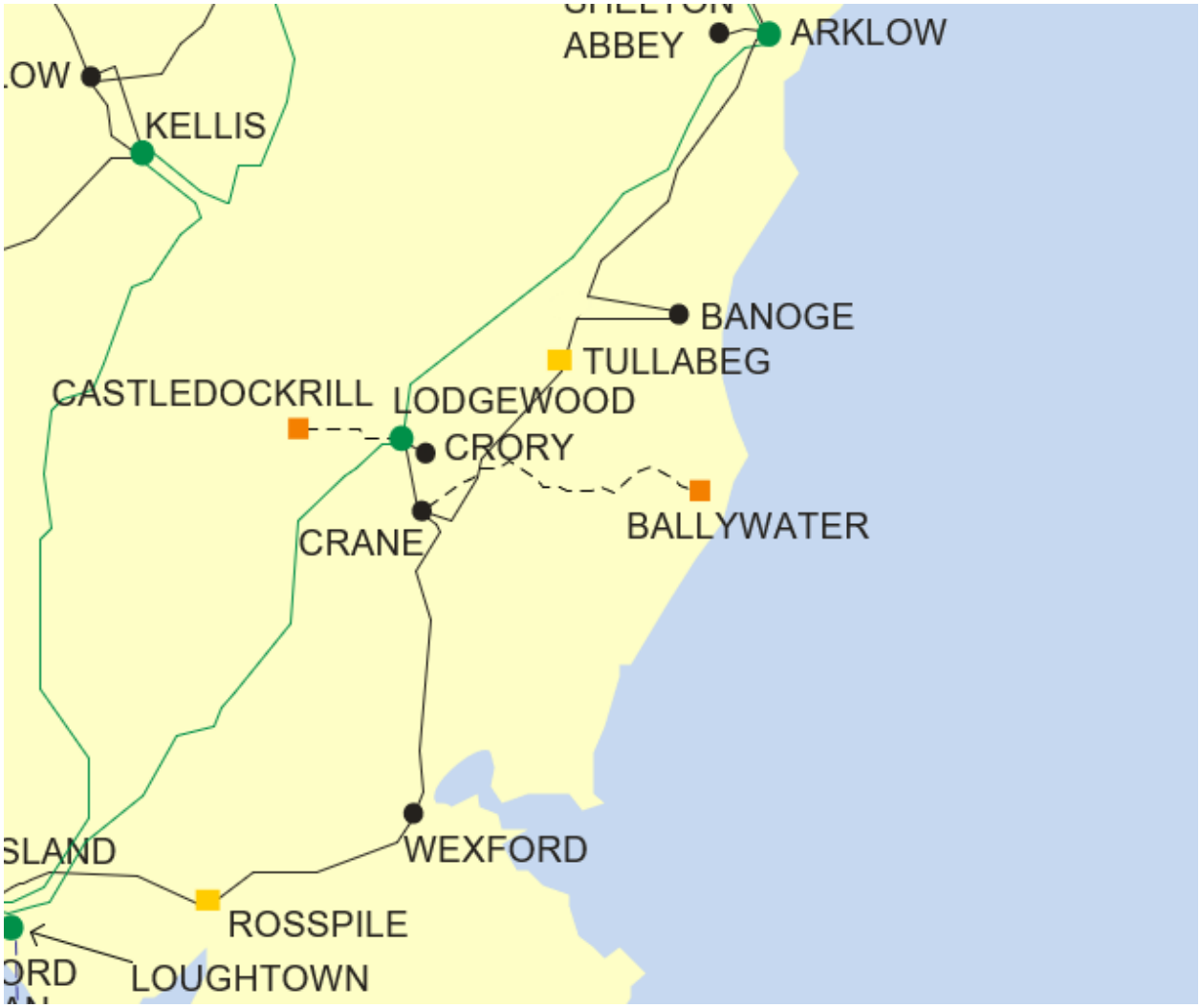

Figure 2-15 - Location of node Ballywater

Generator	SO	Capacity	Type	Status
Ballywater (1)	TSO	31.5	wind priority	connected
Ballywater (2)	TSO	10.5	wind priority	connected

Table 2-20 - Generation Included in Study for Node Ballywater

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	42	42	42				
Installed Capacity (MW)	2029	42	42	42	42			
Installed Capacity (MW)	FG			42		42	42	42
Available Energy (GWh)	2027	119	119	119				
Available Energy (GWh)	2029	119	119	119	119			
Available Energy (GWh)	FG			119		119	119	119
Generation (GWh)	2027	113	111	108				
Generation (GWh)	2029	118	117	115	114			
Generation (GWh)	FG			118		115	114	113
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-21- Surplus, Curtailment and Constraint for Wind priority for Node Ballywater

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	42	
Installed Capacity (MW)	2029 (pro-rata)	42	
Installed Capacity (MW)	FG (pro-rata)		42
Available Energy (GWh)	2027 (GF)	119	
Available Energy (GWh)	2029 (pro-rata)	119	
Available Energy (GWh)	FG (pro-rata)		119
Generation (GWh)	2027 (GF)	114	
Generation (GWh)	2029 (pro-rata)	116	
Generation (GWh)	FG (pro-rata)		115
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-22 - Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Ballywater

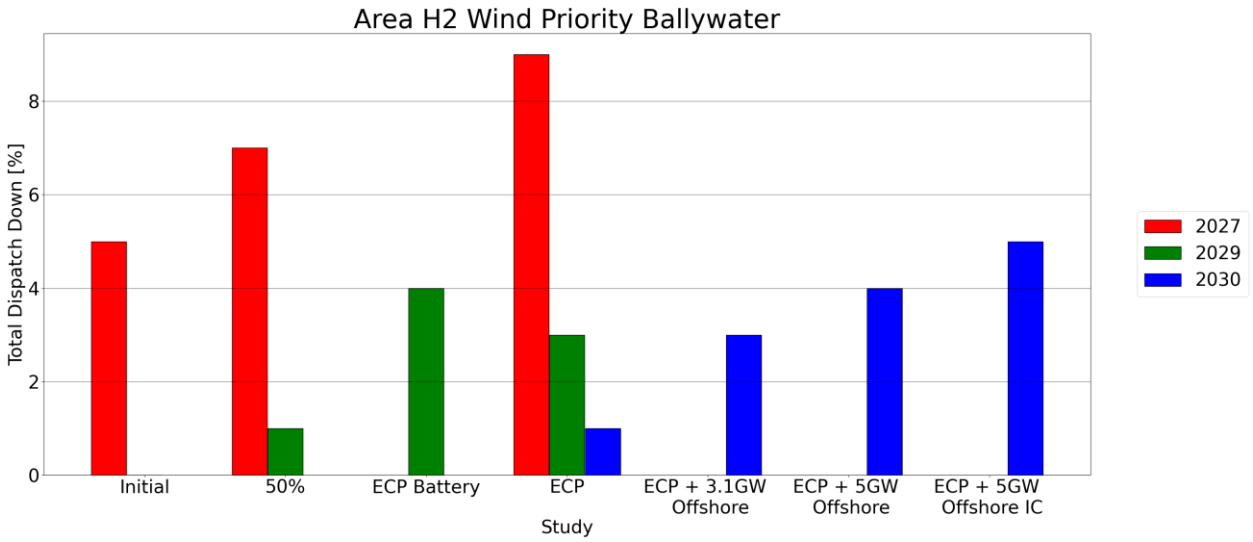

Figure 2-16 - Total Dispatch Down for Wind priority for Node Ballywater

2.6 Banoge

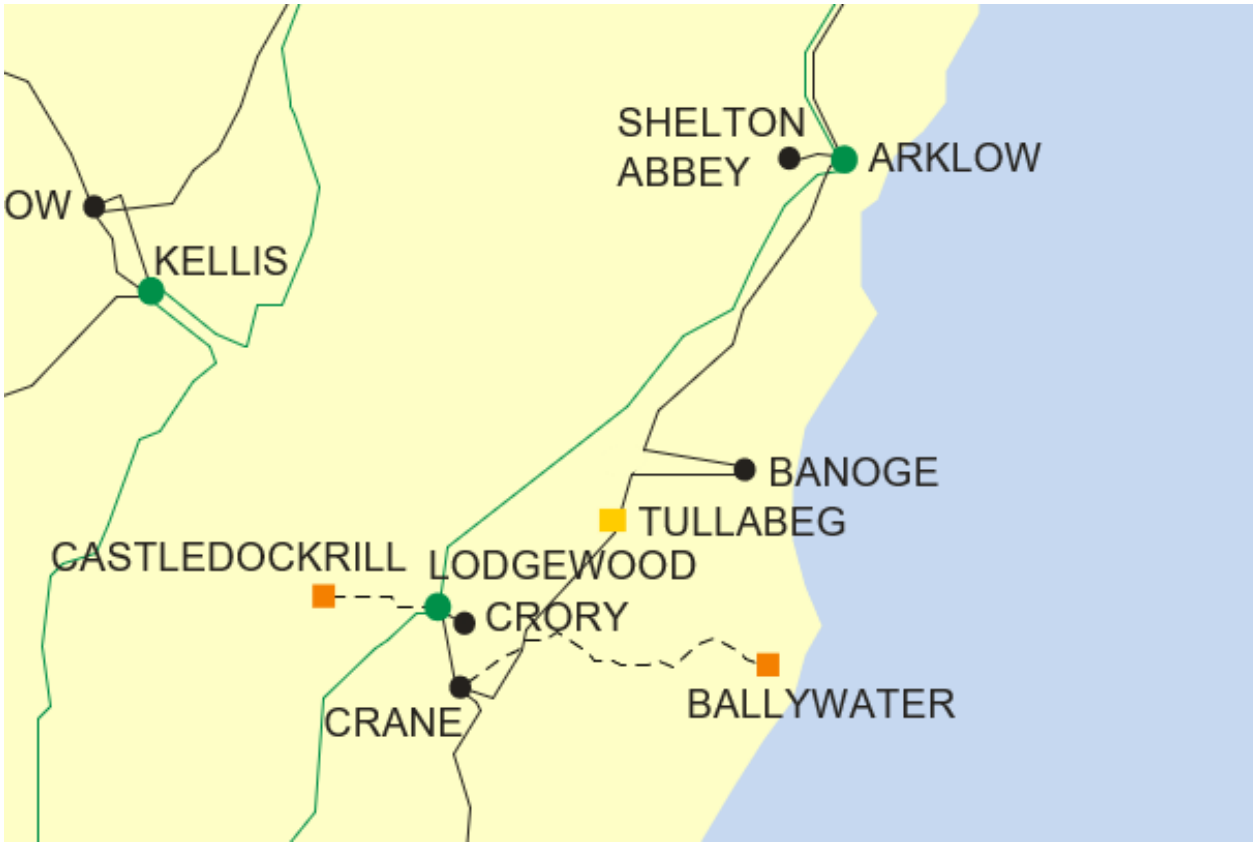

Figure 2-17 - Location of node Banoge

Generator	SO	Capacity	Type	Status
Courtown Solar Farm (previously Coolnastudd)	DSO	4.0	solar not priority	due to connect
Gorey Solar	DSO	4.0	solar not priority	connected

Table 2-23 - Generation Included in Study for Node Banoge

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	8	8	8				
Installed Capacity (MW)	2029	8	8	8	8			
Installed Capacity (MW)	FG			8		8	8	8
Available Energy (GWh)	2027	9	9	9				
Available Energy (GWh)	2029	9	9	9	9			
Available Energy (GWh)	FG			9		9	9	9
Generation (GWh)	2027	9	8	7				
Generation (GWh)	2029	9	9	8	7			
Generation (GWh)	FG			8		8	8	7
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-24 - Surplus, Curtailment and Constraint for Solar non-priority for Node Banoge

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	8	
Installed Capacity (MW)	2029 (pro-rata)	8	
Installed Capacity (MW)	FG (pro-rata)		8
Available Energy (GWh)	2027 (GF)	9	
Available Energy (GWh)	2029 (pro-rata)	9	
Available Energy (GWh)	FG (pro-rata)		9
Generation (GWh)	2027 (GF)	8	
Generation (GWh)	2029 (pro-rata)	9	
Generation (GWh)	FG (pro-rata)		8
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-25 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Banoge

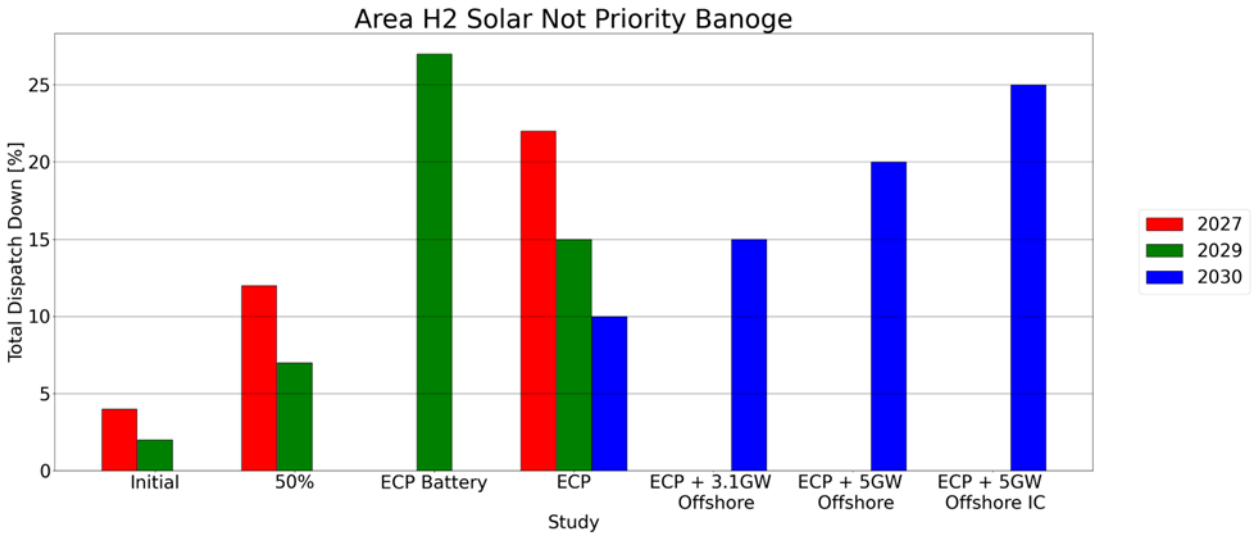

Figure 2-18 - Total Dispatch Down for Solar not priority for Node Banoge

2.7 Carlow

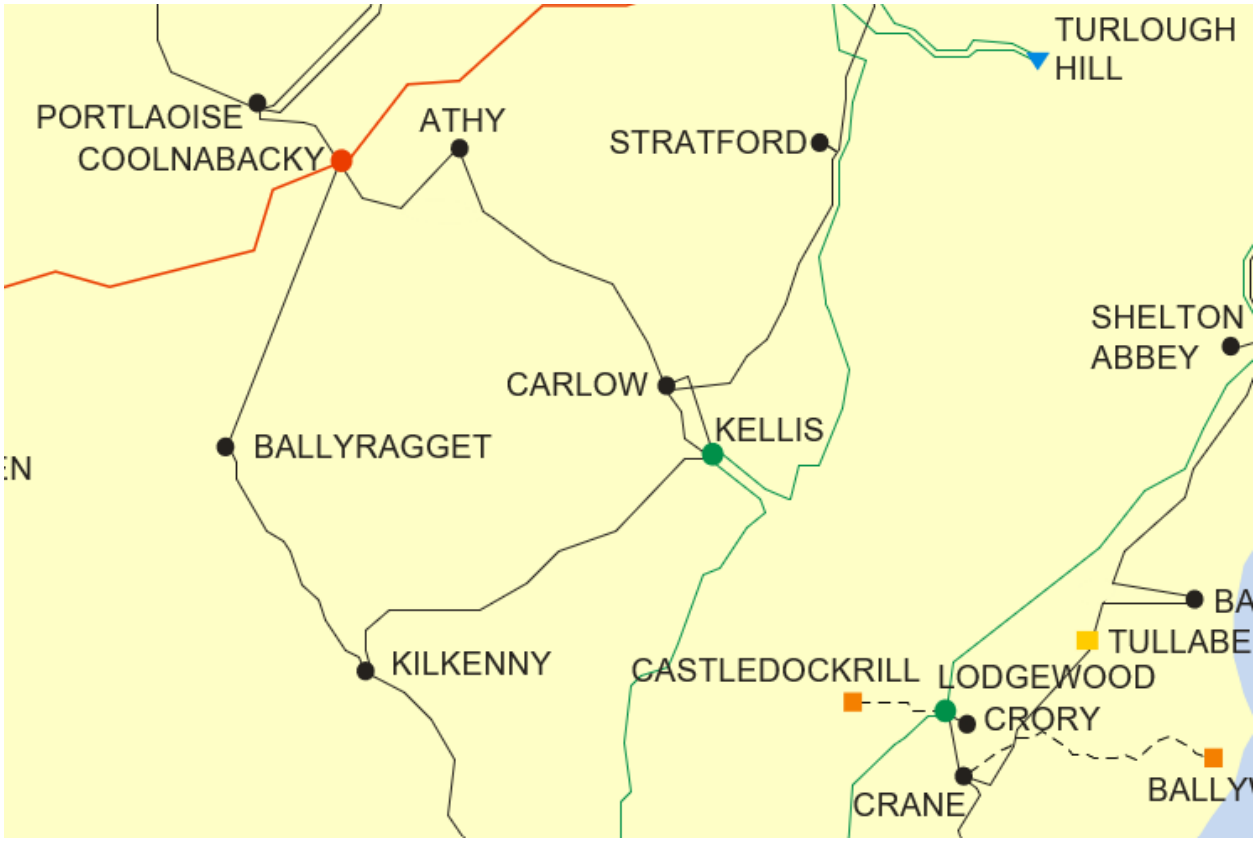

Figure 2-19- Location of node Carlow

Generator	SO	Capacity	Type	Status
Cronelea Upper (1)	DSO	2.55	wind uncontrolled	connected
Cronelea (1)	DSO	4.99	wind priority	connected
Gortahile (1)	DSO	21.0	wind priority	connected
Cronelea (2)	DSO	4.5	wind priority	connected
Cronelea Upper (2)	DSO	1.7	wind uncontrolled	connected
Bilboa (1)	DSO	15.0	wind not priority	due to connect
Kilcarrig Solar PV Farm	DSO	4.0	solar not priority	due to connect
Bilboa Wind farm Ext	DSO	6.0	wind not priority	due to connect
Coppenagh solar	DSO	4.6	solar not priority	due to connect
Coppenagh Solar Park Extension	DSO	4.7	solar not priority	due to connect
Friarstown Solar Farm	TSO	50.0	solar not priority	due to connect
JOHNSTOWN SOLAR PARK	DSO	9.99	solar not priority	due to connect

Table 2-26 - Generation Included in Study for Node Carlow

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	9	41	73				
Installed Capacity (MW)	2029	9	41	73	73			
Installed Capacity (MW)	FG			73		73	73	73
Available Energy (GWh)	2027	10	48	86				
Available Energy (GWh)	2029	10	48	86	86			
Available Energy (GWh)	FG			86		86	86	86
Generation (GWh)	2027	10	42	67				
Generation (GWh)	2029	10	45	73	63			
Generation (GWh)	FG			77		73	69	64
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-27 - Surplus, Curtailment and Constraint for Solar non-priority for Node Carlow

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	41	
Installed Capacity (MW)	2029 (pro-rata)	41	
Installed Capacity (MW)	FG (pro-rata)		73
Available Energy (GWh)	2027 (GF)	48	
Available Energy (GWh)	2029 (pro-rata)	48	
Available Energy (GWh)	FG (pro-rata)		86
Generation (GWh)	2027 (GF)	42	
Generation (GWh)	2029 (pro-rata)	45	
Generation (GWh)	FG (pro-rata)		73
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-28 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Carlow

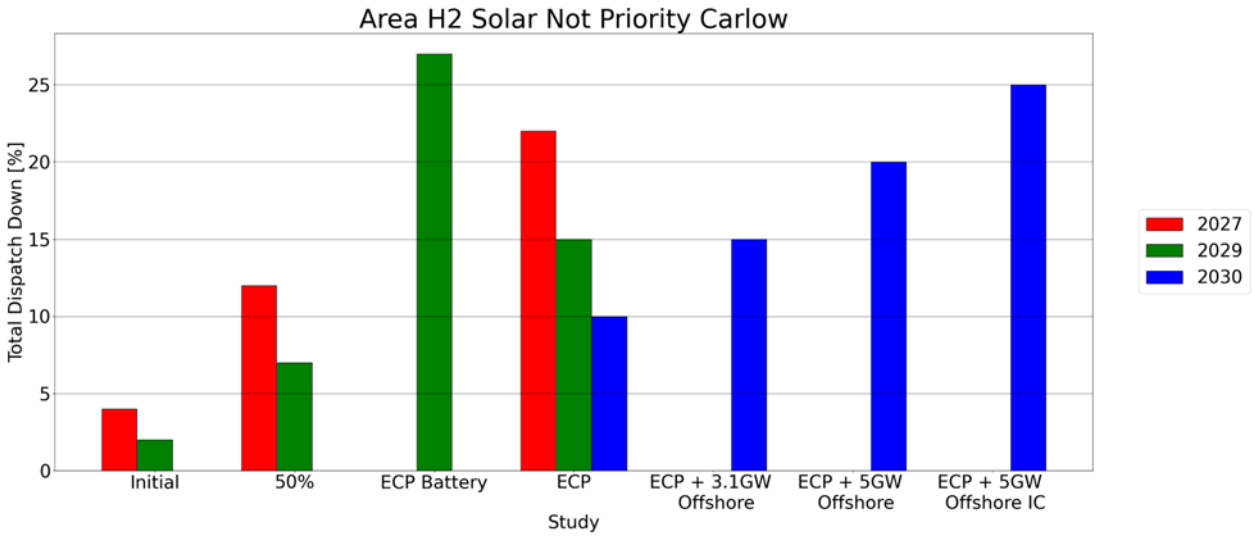

Figure 2-20 - Total Dispatch Down for Solar not priority for Node Carlow

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		10	21				
Installed Capacity (MW)	2029		10	21	21			
Installed Capacity (MW)	FG			21		21	21	21
Available Energy (GWh)	2027		30	59				
Available Energy (GWh)	2029		30	59	59			
Available Energy (GWh)	FG			59		59	59	59
Generation (GWh)	2027		26	48				
Generation (GWh)	2029		28	54	51			
Generation (GWh)	FG			56		50	43	38
Surplus (%)	2027		6 %	13 %				
Surplus (%)	2029		2 %	5 %	8 %			
Surplus (%)	FG			3 %		12 %	24 %	33 %
Curtailment (%)	2027		3 %	4 %				
Curtailment (%)	2029		1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		2 %	1 %	3 %			
Constraint (%)	FG			2 %		1 %	1 %	1 %
Total Dispatch Down (%)	2027		12 %	20 %				
Total Dispatch Down (%)	2029		5 %	9 %	14 %			
Total Dispatch Down (%)	FG			6 %		15 %	28 %	36 %

Table 2-29- Surplus, Curtailment and Constraint for Wind non-priority for Node Carlow

Area H2	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)		21
Available Energy (GWh)	2027 (GF)	30	
Available Energy (GWh)	2029 (pro-rata)	30	
Available Energy (GWh)	FG (pro-rata)		59
Generation (GWh)	2027 (GF)	25	
Generation (GWh)	2029 (pro-rata)	28	
Generation (GWh)	FG (pro-rata)		51
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		12 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	6 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	4 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-30- Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Carlow

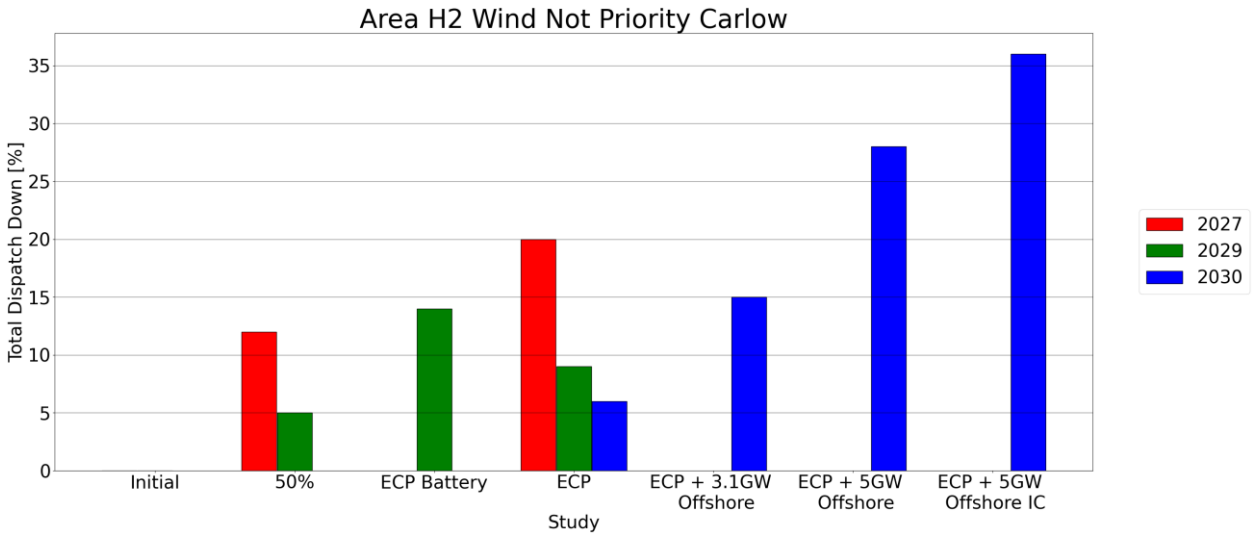

Figure 2-21- Total Dispatch Down for Wind not priority for Node Carlow

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	30	30	30				
Installed Capacity (MW)	2029	30	30	30	30			
Installed Capacity (MW)	FG			30		30	30	30
Available Energy (GWh)	2027	86	86	86				
Available Energy (GWh)	2029	86	86	86	86			
Available Energy (GWh)	FG			86		86	86	86
Generation (GWh)	2027	82	80	78				
Generation (GWh)	2029	86	85	84	83			
Generation (GWh)	FG			86		84	83	82
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-31- Surplus, Curtailment and Constraint for Wind priority for Node Carlow

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	30	
Installed Capacity (MW)	2029 (pro-rata)	30	
Installed Capacity (MW)	FG (pro-rata)		30
Available Energy (GWh)	2027 (GF)	86	
Available Energy (GWh)	2029 (pro-rata)	86	
Available Energy (GWh)	FG (pro-rata)		86
Generation (GWh)	2027 (GF)	83	
Generation (GWh)	2029 (pro-rata)	84	
Generation (GWh)	FG (pro-rata)		84
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-32- Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Carlow

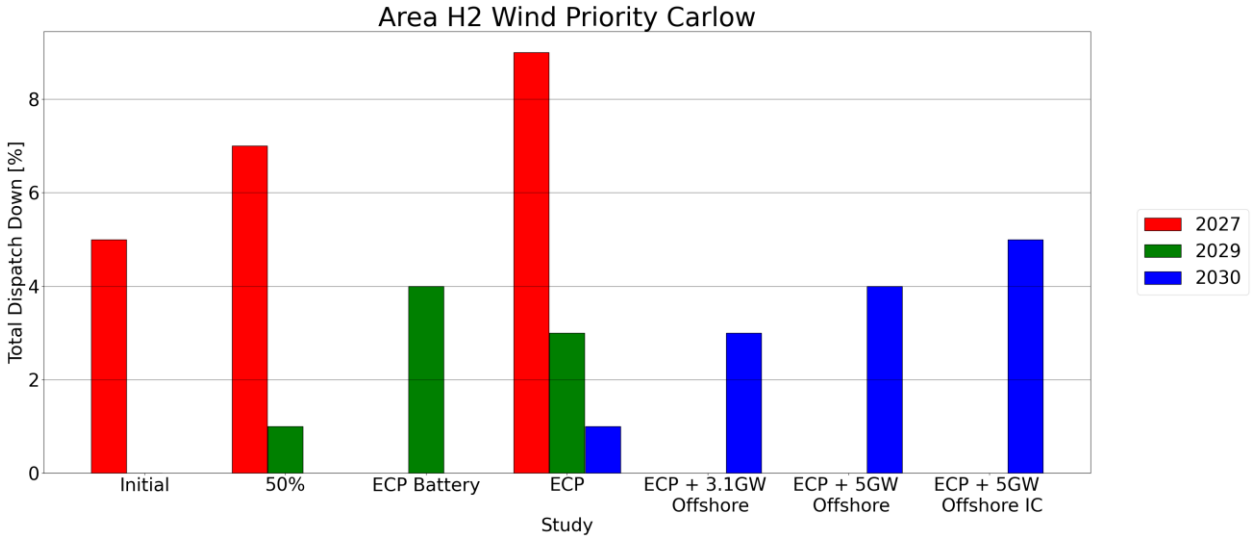

Figure 2-22- Total Dispatch Down for Wind priority for Node Carlow

2.8 Castledockrell

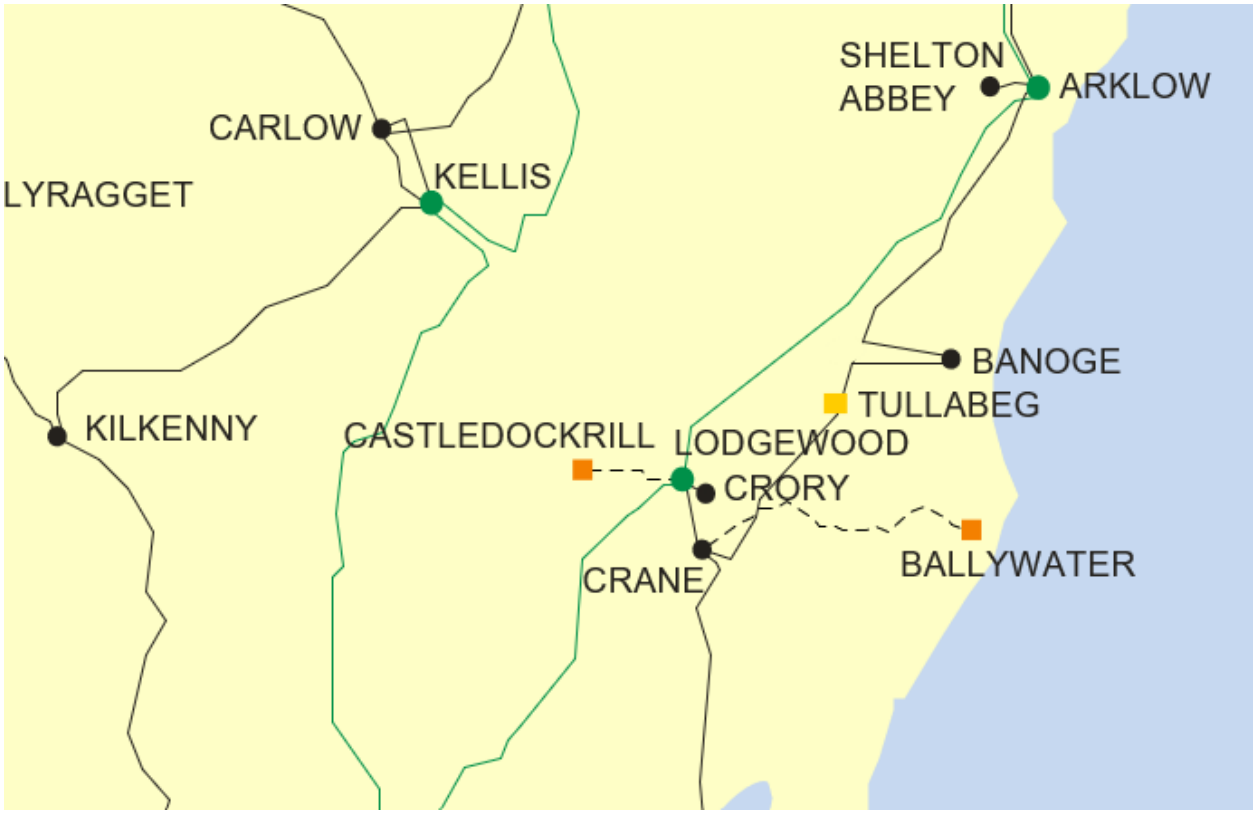

Figure 2-23- Location of node Castledockrell

Generator	SO	Capacity	Type	Status
Castledockrell (3)	TSO	3.3	wind priority	connected
Castledockrell (4)	TSO	16.1	wind priority	connected
Castledockrell (1)	TSO	20.0	wind priority	connected
Castledockrell (2)	TSO	2.0	wind priority	connected

Table 2-33- Generation Included in Study for Node Castledockrell

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	41	41	41				
Installed Capacity (MW)	2029	41	41	41	41			
Installed Capacity (MW)	FG			41		41	41	41
Available Energy (GWh)	2027	117	117	117				
Available Energy (GWh)	2029	117	117	117	117			
Available Energy (GWh)	FG			117		117	117	117
Generation (GWh)	2027	112	109	106				
Generation (GWh)	2029	117	115	113	112			
Generation (GWh)	FG			116		114	112	111
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-34 - Surplus, Curtailment and Constraint for Wind priority for Node Castledockrell

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	41	
Installed Capacity (MW)	2029 (pro-rata)	41	
Installed Capacity (MW)	FG (pro-rata)		41
Available Energy (GWh)	2027 (GF)	117	
Available Energy (GWh)	2029 (pro-rata)	117	
Available Energy (GWh)	FG (pro-rata)		117
Generation (GWh)	2027 (GF)	113	
Generation (GWh)	2029 (pro-rata)	114	
Generation (GWh)	FG (pro-rata)		113
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-35- Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Castledockrell

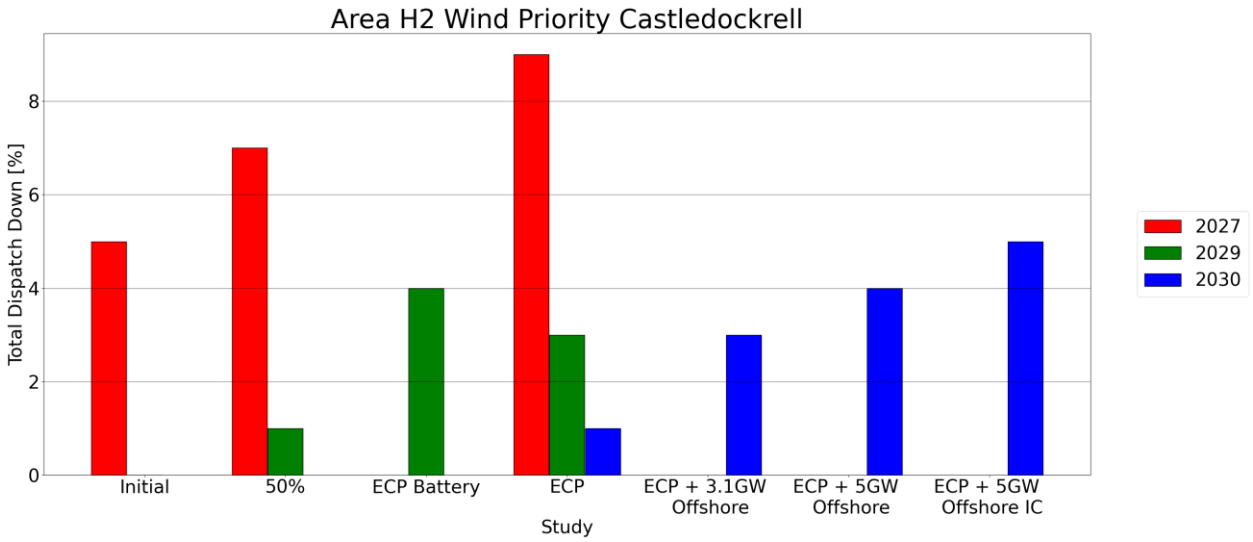

Figure 2-24- Total Dispatch Down for Wind priority for Node Castledockrell

2.9 Crane

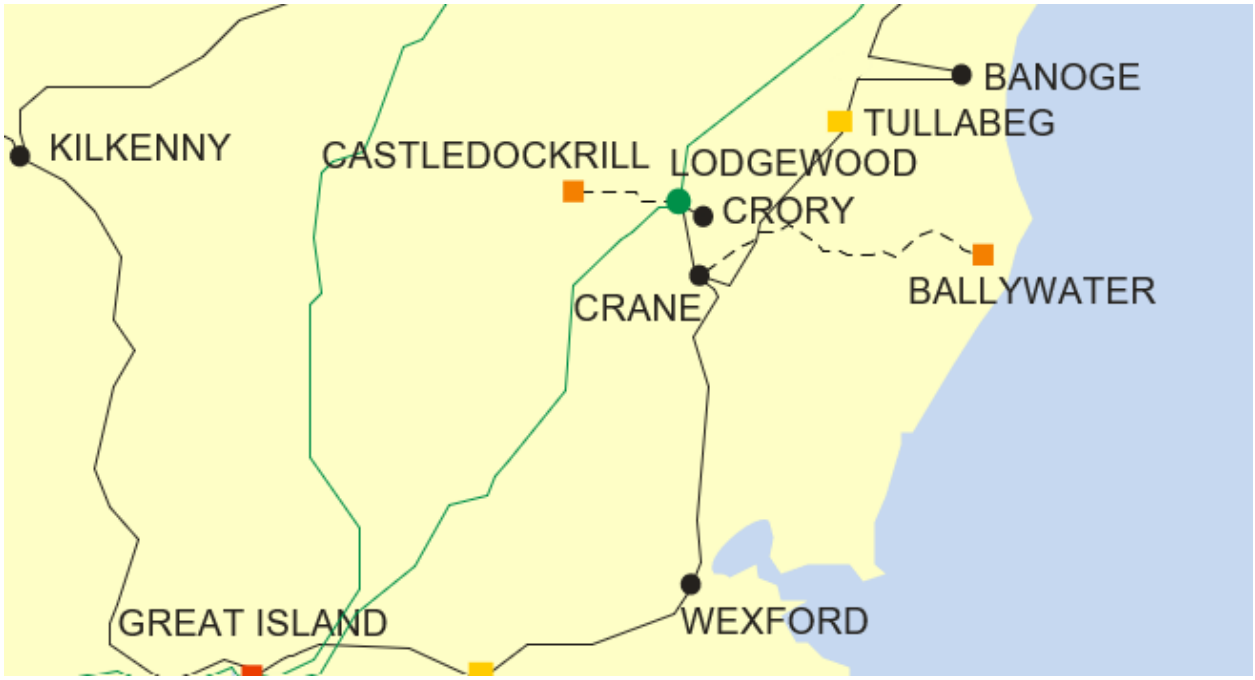

Figure 2-25- Location of node Crane

Generator	SO	Capacity	Type	Status
Greenoge (1)	DSO	4.99	wind uncontrolled	connected
Kilbranish (1)	DSO	2.5	wind priority	connected
Macallian Solar	DSO	9.0	solar not priority	connected
Monart Spa Ground Mount 3	DSO	1.3	solar not priority	due to connect

Table 2-36- Generation Included in Study for Node Crane

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	9	10	10				
Installed Capacity (MW)	2029	9	10	10	10			
Installed Capacity (MW)	FG			10		10	10	10
Available Energy (GWh)	2027	11	11	12				
Available Energy (GWh)	2029	11	11	12	12			
Available Energy (GWh)	FG			12		12	12	12
Generation (GWh)	2027	10	10	9				
Generation (GWh)	2029	10	11	10	9			
Generation (GWh)	FG			11		10	10	9
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-37- Surplus, Curtailment and Constraint for Solar non-priority for Node Crane

Area H2	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)		10
Available Energy (GWh)	2027 (GF)	11	
Available Energy (GWh)	2029 (pro-rata)	11	
Available Energy (GWh)	FG (pro-rata)		12
Generation (GWh)	2027 (GF)	10	
Generation (GWh)	2029 (pro-rata)	11	
Generation (GWh)	FG (pro-rata)		10
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-38- Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Crane

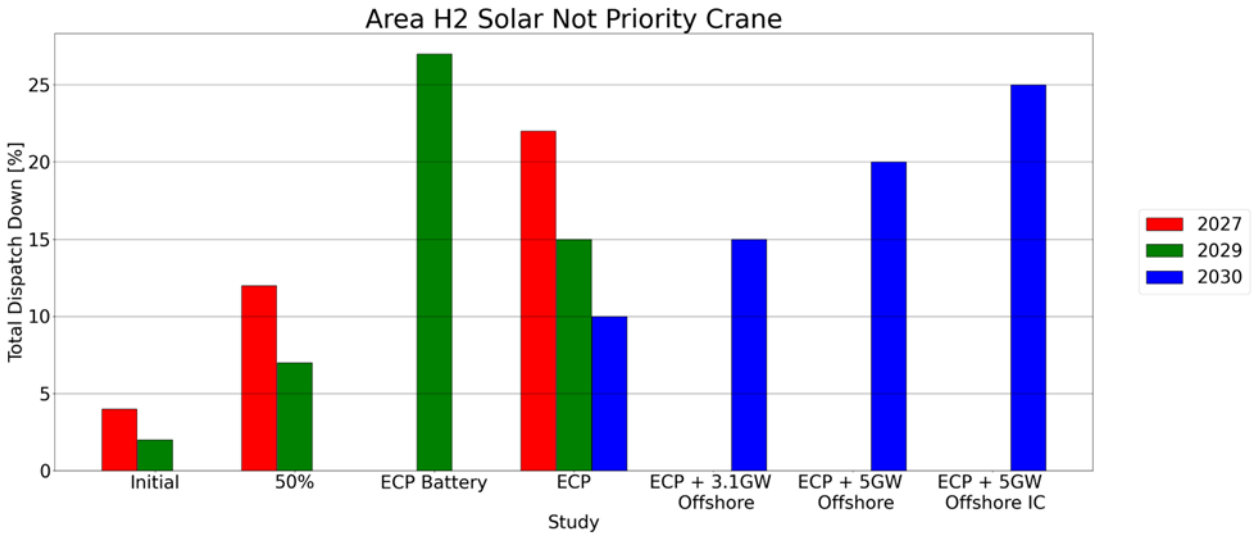

Figure 2-26- Total Dispatch Down for Solar not priority for Node Crane

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	2	2	2				
Installed Capacity (MW)	2029	2	2	2	2			
Installed Capacity (MW)	FG			2		2	2	2
Available Energy (GWh)	2027	7	7	7				
Available Energy (GWh)	2029	7	7	7	7			
Available Energy (GWh)	FG			7		7	7	7
Generation (GWh)	2027	7	7	6				
Generation (GWh)	2029	7	7	7	7			
Generation (GWh)	FG			7		7	7	7
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-39- Surplus, Curtailment and Constraint for Wind priority for Node Crane

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	2	
Installed Capacity (MW)	2029 (pro-rata)	2	
Installed Capacity (MW)	FG (pro-rata)		2
Available Energy (GWh)	2027 (GF)	7	
Available Energy (GWh)	2029 (pro-rata)	7	
Available Energy (GWh)	FG (pro-rata)		7
Generation (GWh)	2027 (GF)	7	
Generation (GWh)	2029 (pro-rata)	7	
Generation (GWh)	FG (pro-rata)		7
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-40- Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Crane

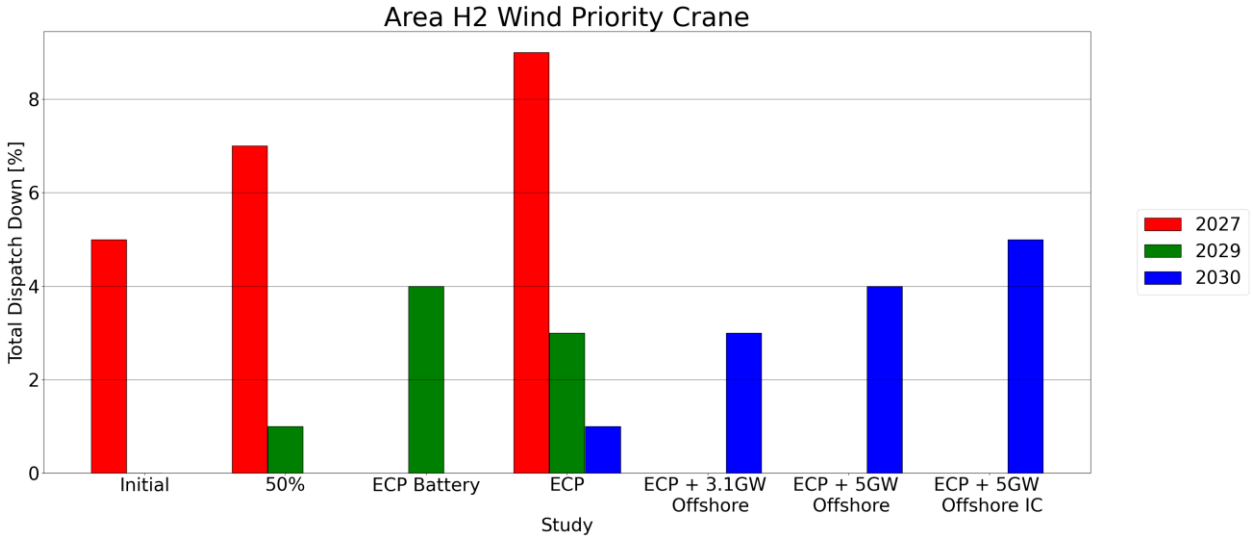

Figure 2-27- Total Dispatch Down for Wind priority for Node Crane

2.10 Crory

Figure 2-28- Location of node Crory

Generator	SO	Capacity	Type	Status
Knocknalour (1)	DSO	5.0	wind priority	connected
Ballycadden (1)	DSO	14.45	wind priority	connected
Ballyduff (1)	DSO	4.0	wind uncontrolled	connected
Ballynancoran (1)	DSO	4.0	wind uncontrolled	connected
Gibbet Hill (1)	DSO	14.8	wind priority	connected
Ballaman formerly (Kennystown) (1)	DSO	3.6	wind uncontrolled	connected
Knocknalour (2)	DSO	3.95	wind uncontrolled	connected
Ballycadden (2)	DSO	9.762	wind priority	connected
The Dell Solar	DSO	20.0	solar not priority	due to connect

Table 2-41- Generation Included in Study for Node Crory

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	20	20	20				
Installed Capacity (MW)	2029	20	20	20	20			
Installed Capacity (MW)	FG			20		20	20	20
Available Energy (GWh)	2027	23	23	23				
Available Energy (GWh)	2029	23	23	23	23			
Available Energy (GWh)	FG			23		23	23	23
Generation (GWh)	2027	22	21	18				
Generation (GWh)	2029	23	22	20	17			
Generation (GWh)	FG			21		20	19	17
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-42- Surplus, Curtailment and Constraint for Solar non-priority for Node Crory

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	20	
Installed Capacity (MW)	2029 (pro-rata)	20	
Installed Capacity (MW)	FG (pro-rata)		20
Available Energy (GWh)	2027 (GF)	23	
Available Energy (GWh)	2029 (pro-rata)	23	
Available Energy (GWh)	FG (pro-rata)		23
Generation (GWh)	2027 (GF)	21	
Generation (GWh)	2029 (pro-rata)	22	
Generation (GWh)	FG (pro-rata)		20
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-43- Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Crory

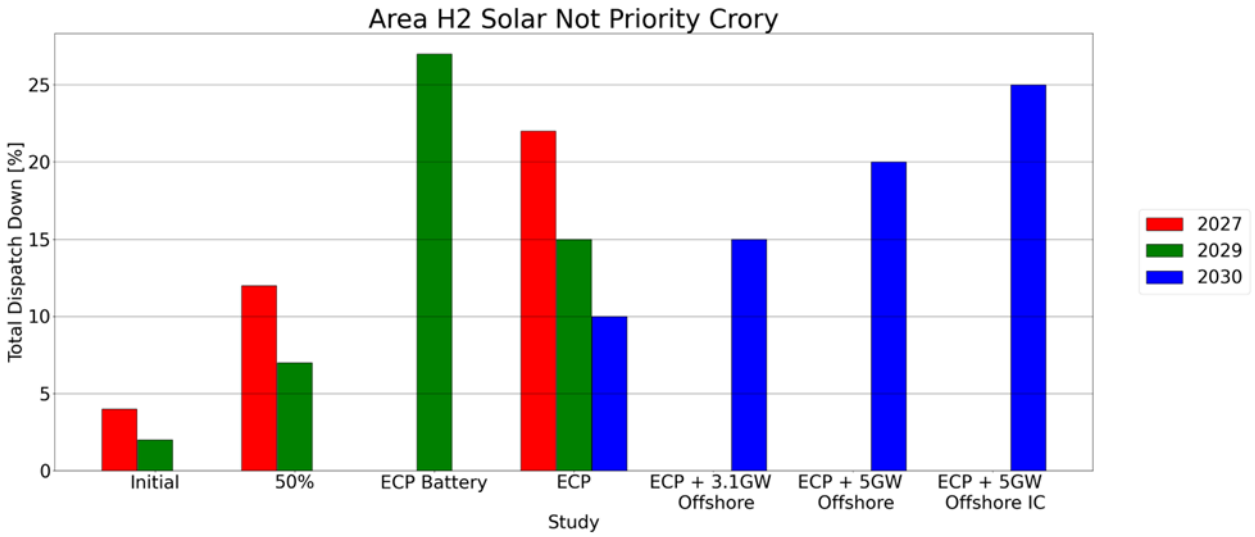

Figure 2-29- Total Dispatch Down for Solar not priority for Node Crory

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	44	44	44				
Installed Capacity (MW)	2029	44	44	44	44			
Installed Capacity (MW)	FG			44		44	44	44
Available Energy (GWh)	2027	124	124	124				
Available Energy (GWh)	2029	124	124	124	124			
Available Energy (GWh)	FG			124		124	124	124
Generation (GWh)	2027	119	116	113				
Generation (GWh)	2029	124	123	121	119			
Generation (GWh)	FG			124		121	120	118
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-44- Surplus, Curtailment and Constraint for Wind priority for Node Crory

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	44	
Installed Capacity (MW)	2029 (pro-rata)	44	
Installed Capacity (MW)	FG (pro-rata)		44
Available Energy (GWh)	2027 (GF)	124	
Available Energy (GWh)	2029 (pro-rata)	124	
Available Energy (GWh)	FG (pro-rata)		124
Generation (GWh)	2027 (GF)	120	
Generation (GWh)	2029 (pro-rata)	121	
Generation (GWh)	FG (pro-rata)		121
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-45- Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Crory

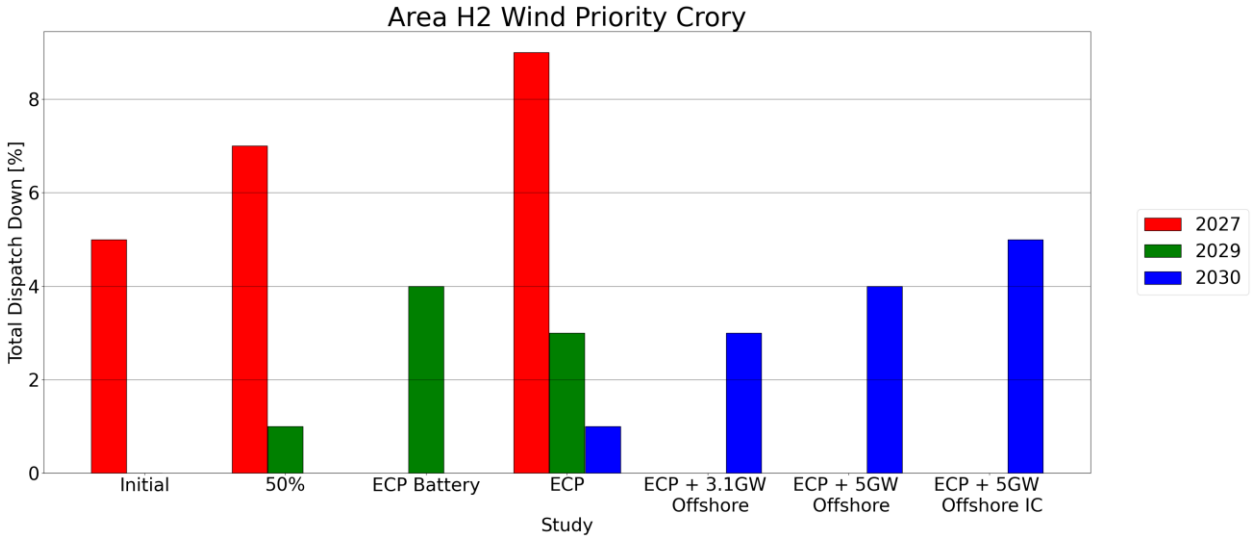

Figure 2-30- Total Dispatch Down for Wind priority for Node Crory

2.11 Effernoge

Figure 2-31- Location of node Effernoge

Generator	SO	Capacity	Type	Status
Tomsallagh Solar	TSO	50.0	solar not priority	due to connect

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

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

Area H2	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		29	59				
Available Energy (GWh)	2029		29	59	59			
Available Energy (GWh)	FG			59		59	59	59
Generation (GWh)	2027		26	45				
Generation (GWh)	2029		27	50	43			
Generation (GWh)	FG			53		50	47	44
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027		2 %	5 %				
Curtailment (%)	2029		2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		4 %	4 %				
Constraint (%)	2029		2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027		12 %	22 %				
Total Dispatch Down (%)	2029		7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

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

Area H2	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)	29	
Available Energy (GWh)	2029 (pro-rata)	29	
Available Energy (GWh)	FG (pro-rata)		59
Generation (GWh)	2027 (GF)	26	
Generation (GWh)	2029 (pro-rata)	27	
Generation (GWh)	FG (pro-rata)		50
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

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

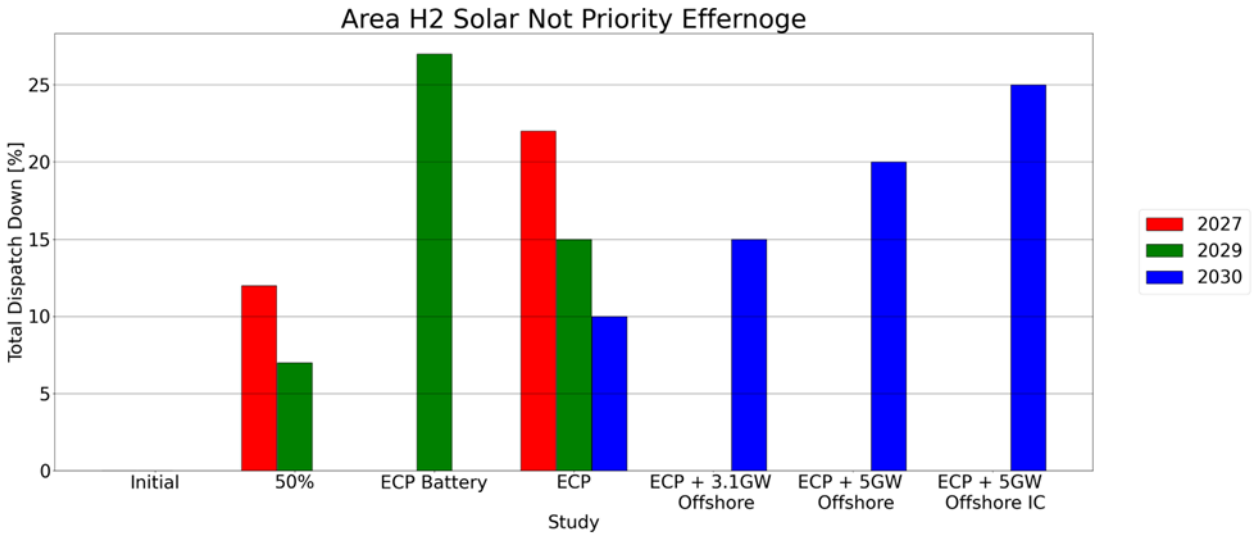

Figure 2-32- Total Dispatch Down for Solar not priority for Node Effernoge

2.12 Garrintaggart

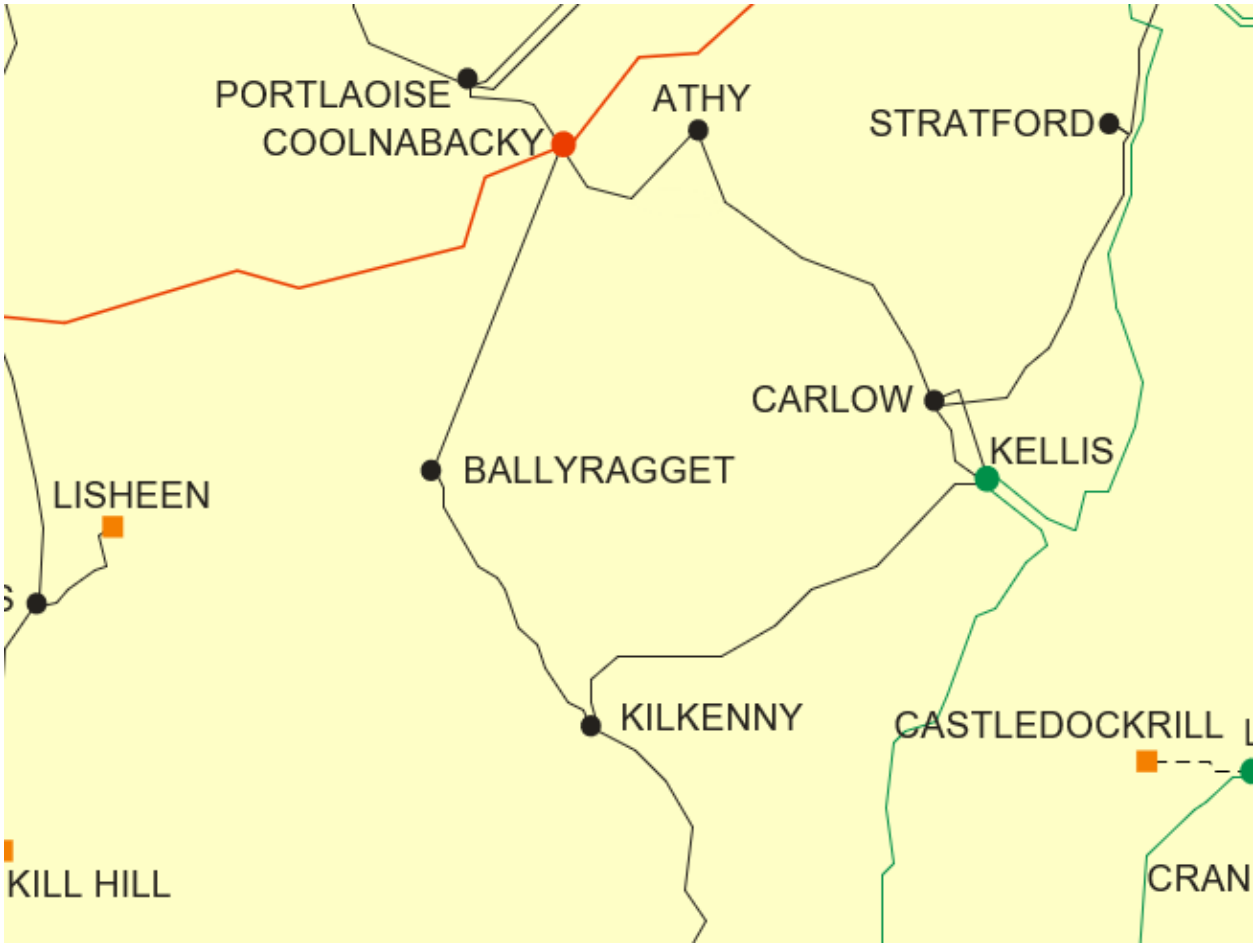

Figure 2-33 - Location of node Garrintaggart

Generator	SO	Capacity	Type	Status
Pinewoods wind	TSO	49.5	wind not priority	due to connect

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

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

Area H2	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		70	140				
Available Energy (GWh)	2029		70	140	140			
Available Energy (GWh)	FG			140		140	140	140
Generation (GWh)	2027		62	112				
Generation (GWh)	2029		66	127	120			
Generation (GWh)	FG			132		119	101	89
Surplus (%)	2027		6 %	13 %				
Surplus (%)	2029		2 %	5 %	8 %			
Surplus (%)	FG			3 %		12 %	24 %	33 %
Curtailment (%)	2027		3 %	4 %				
Curtailment (%)	2029		1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		2 %	1 %	3 %			
Constraint (%)	FG			2 %		1 %	1 %	1 %
Total Dispatch Down (%)	2027		12 %	20 %				
Total Dispatch Down (%)	2029		5 %	9 %	14 %			
Total Dispatch Down (%)	FG			6 %		15 %	28 %	36 %

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

Area H2	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)	70	
Available Energy (GWh)	2029 (pro-rata)	70	
Available Energy (GWh)	FG (pro-rata)		140
Generation (GWh)	2027 (GF)	60	
Generation (GWh)	2029 (pro-rata)	67	
Generation (GWh)	FG (pro-rata)		119
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		12 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	6 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	4 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

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

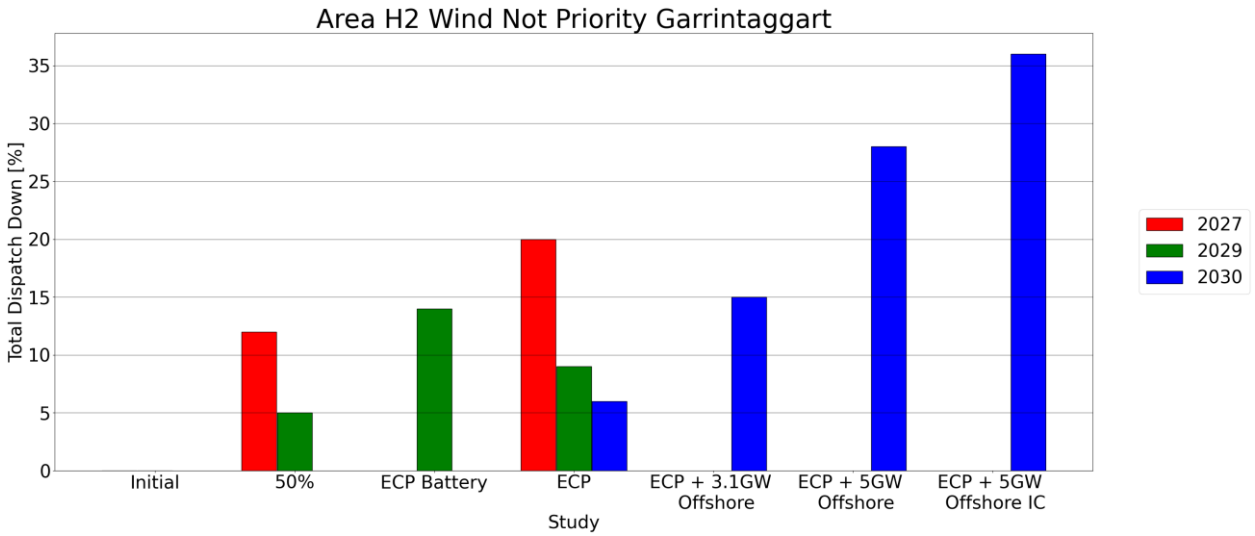

Figure 2-34- Total Dispatch Down for Wind not priority for Node Garrintaggart

2.13 Great island

Figure 2-35 - Location of node Great island

Generator	SO	Capacity	Type	Status
Ballycullane Solar Park	DSO	4.99	solar not priority	connected
Ballyedock	DSO	12.0	solar not priority	due to connect

Table 2-52 - Generation Included in Study for Node Great island

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

Area H2	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	20	20	20				
Available Energy (GWh)	2029	20	20	20	20			
Available Energy (GWh)	FG			20		20	20	20
Generation (GWh)	2027	19	18	15				
Generation (GWh)	2029	20	19	17	15			
Generation (GWh)	FG			18		17	16	15
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

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

Area H2	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)	20	
Available Energy (GWh)	2029 (pro-rata)	20	
Available Energy (GWh)	FG (pro-rata)		20
Generation (GWh)	2027 (GF)	18	
Generation (GWh)	2029 (pro-rata)	19	
Generation (GWh)	FG (pro-rata)		17
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

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

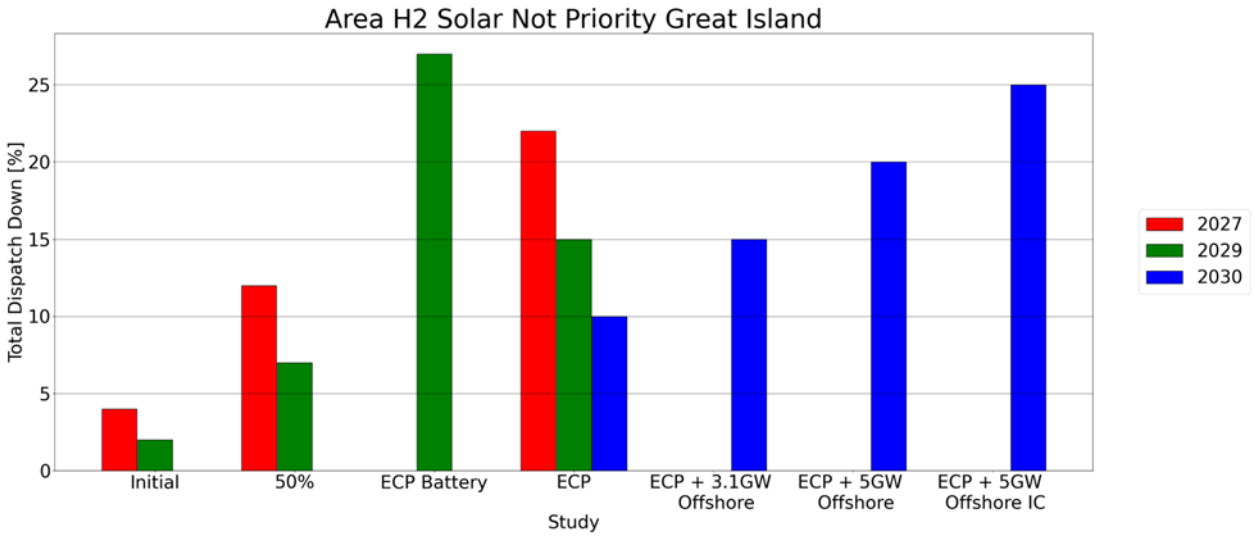

Figure 2-36 - Total Dispatch Down for Solar not priority for Node Great island

2.14 Great island 220kv

Figure 2-37 - Location of node Great island 220kv

Generator	SO	Capacity	Type	Status
Great Island OWF	TSO	378.0	wind not priority	due to connect

Table 2-55 - Generation Included in Study for Node Great island 220kv

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

Area H2	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						378	378
Available Energy (GWh)	2027							
Available Energy (GWh)	2029							
Available Energy (GWh)	FG						1520	1520
Generation (GWh)	2027							
Generation (GWh)	2029							
Generation (GWh)	FG						1139	1015
Surplus (%)	2027							
Surplus (%)	2029							
Surplus (%)	FG						21 %	30 %
Curtailment (%)	2027							
Curtailment (%)	2029							
Curtailment (%)	FG						2 %	3 %
Constraint (%)	2027							
Constraint (%)	2029							
Constraint (%)	FG						1 %	1 %
Total Dispatch Down (%)	2027							
Total Dispatch Down (%)	2029							
Total Dispatch Down (%)	FG						25 %	33 %

Table 2-56 - Surplus, Curtailment and Constraint for Wind non-priority for Node Great island 220kv

Area H2	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 2-57 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Great island 220kv

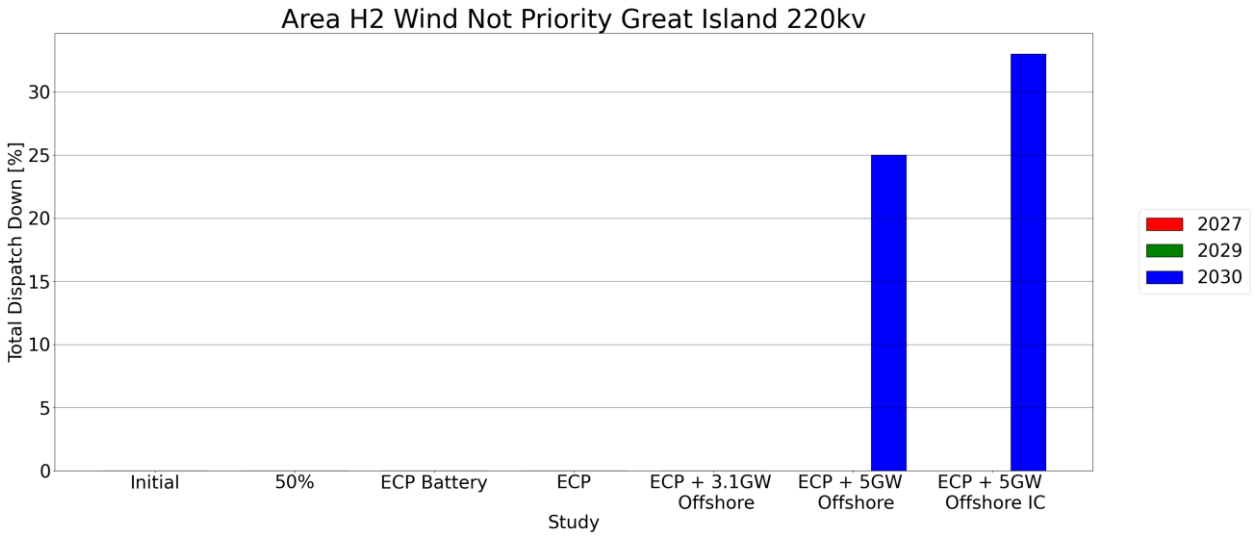

Figure 2-38 - Total Dispatch Down for Wind not priority for Node Great island 220kv

2.15 Kellis

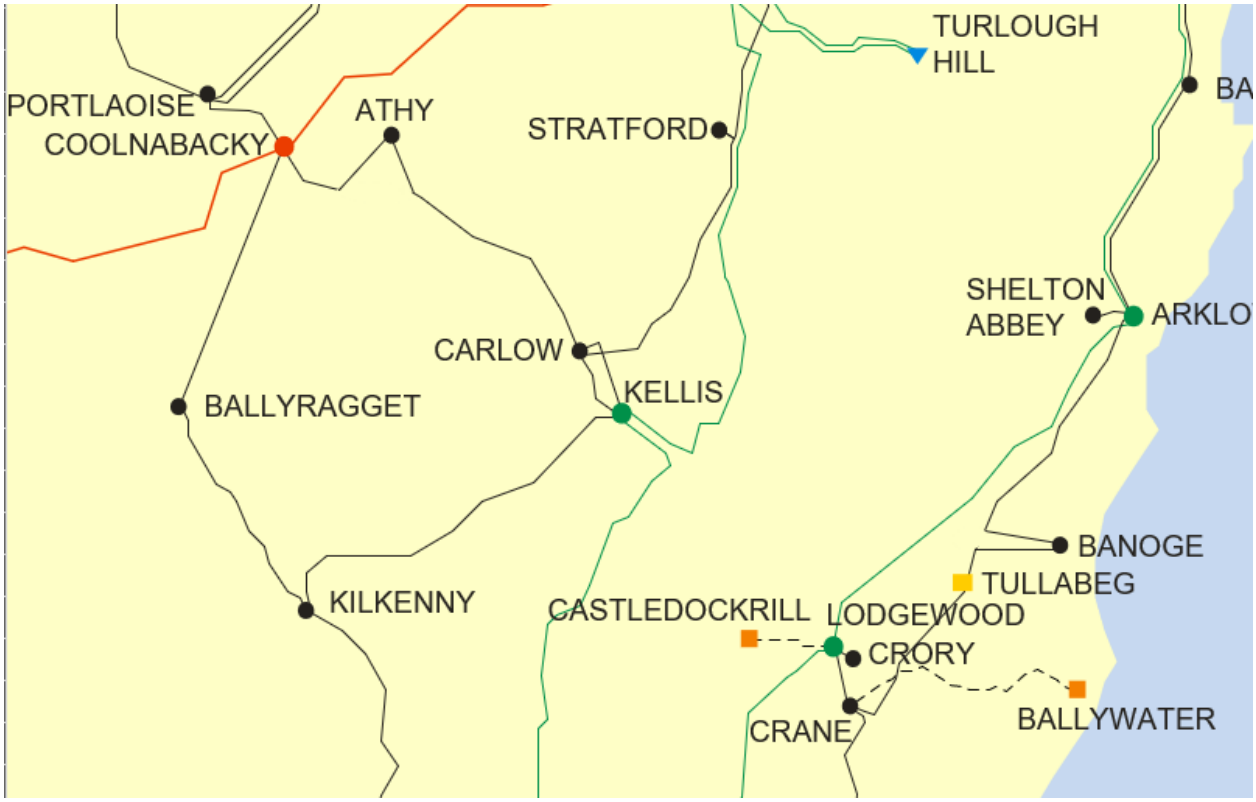

Figure 2-39 - Location of node Kellis

Generator	SO	Capacity	Type	Status
Garreenleen Solar Farm	TSO	81.0	solar not priority	due to connect
Grangeford Solar PV	TSO	48.0	solar not priority	due to connect
Garreenleen Solar Farm Phase 2	TSO	82.0	solar not priority	due to connect

Table 2-58 - Generation Included in Study for Node Kellis

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		106	211				
Installed Capacity (MW)	2029		106	211	211			
Installed Capacity (MW)	FG			211		211	211	211
Available Energy (GWh)	2027		124	247				
Available Energy (GWh)	2029		124	247	247			
Available Energy (GWh)	FG			247		247	247	247
Generation (GWh)	2027		109	192				
Generation (GWh)	2029		115	209	181			
Generation (GWh)	FG			222		210	199	184
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027		2 %	5 %				
Curtailment (%)	2029		2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		4 %	4 %				
Constraint (%)	2029		2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027		12 %	22 %				
Total Dispatch Down (%)	2029		7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-59 - Surplus, Curtailment and Constraint for Solar non-priority for Node Kellis

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	106	
Installed Capacity (MW)	2029 (pro-rata)	106	
Installed Capacity (MW)	FG (pro-rata)		211
Available Energy (GWh)	2027 (GF)	124	
Available Energy (GWh)	2029 (pro-rata)	124	
Available Energy (GWh)	FG (pro-rata)		247
Generation (GWh)	2027 (GF)	109	
Generation (GWh)	2029 (pro-rata)	115	
Generation (GWh)	FG (pro-rata)		210
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-60 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Kellis

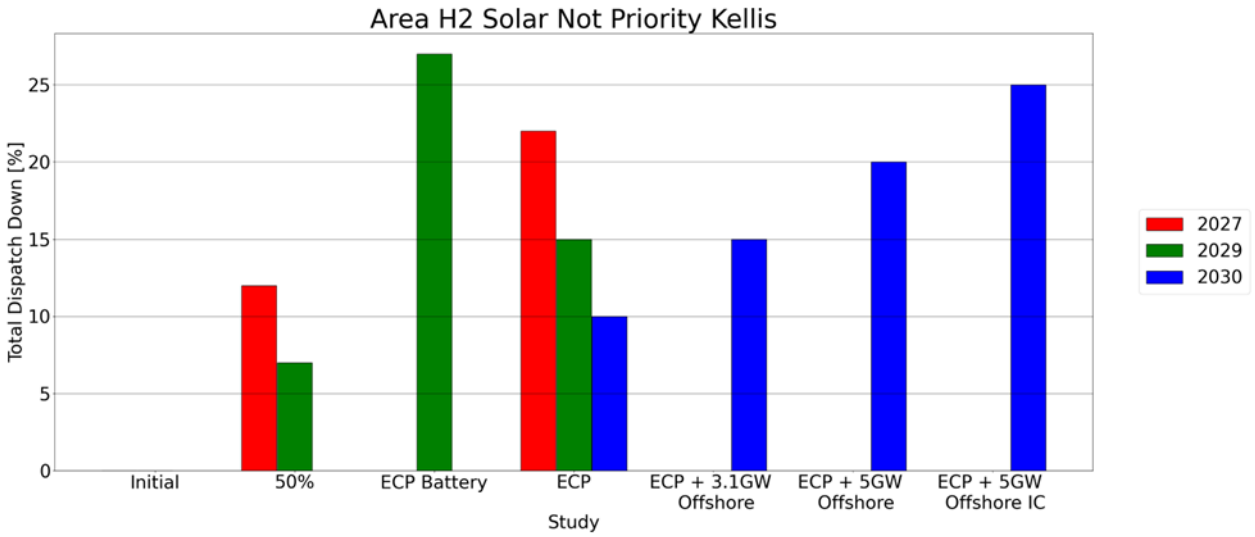

Figure 2-40 - Total Dispatch Down for Solar not priority for Node Kellis

2.16 Kellymount

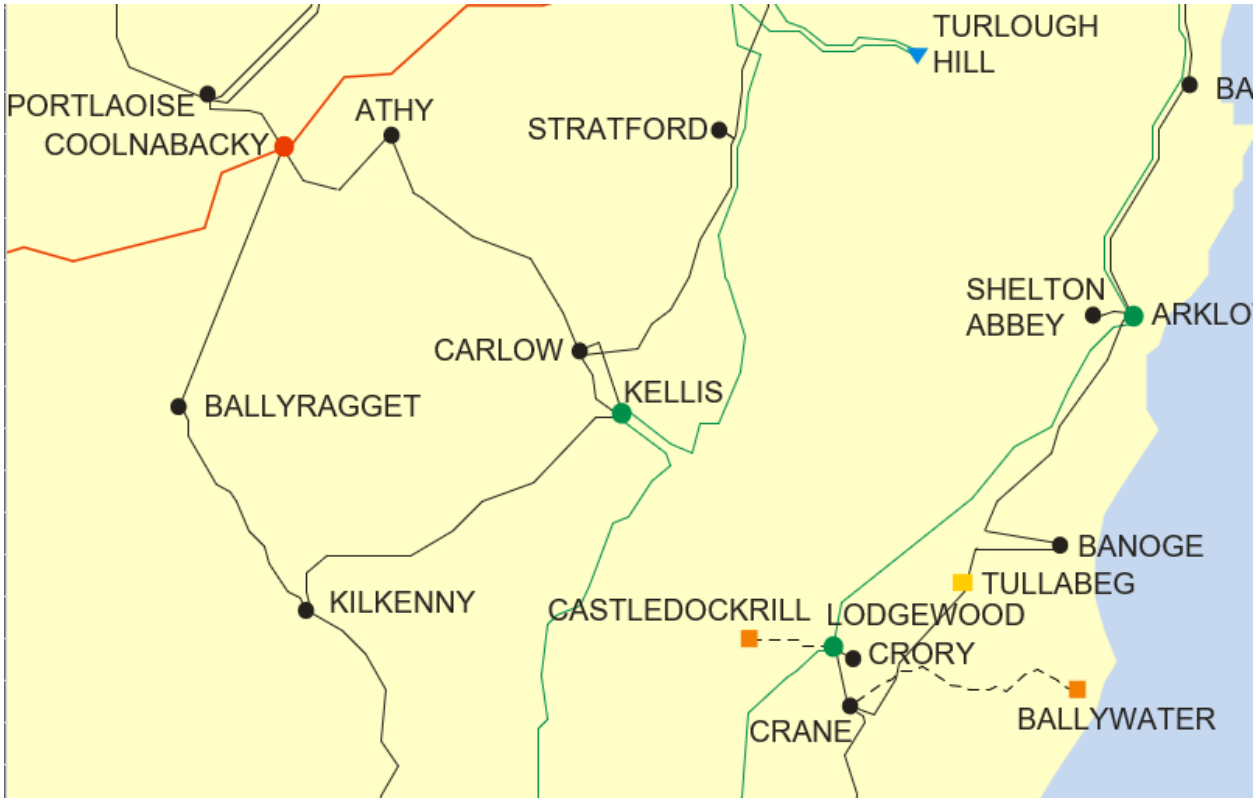

Figure 2-41 - Location of node Kellymount

Generator	SO	Capacity	Type	Status
White Hill Wind Farm	TSO	50.4	wind not priority	due to connect

Table 2-61 - Generation Included in Study for Node Kellymount

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

Area H2	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		71	143				
Available Energy (GWh)	2029		71	143	143			
Available Energy (GWh)	FG			143		143	143	143
Generation (GWh)	2027		63	114				
Generation (GWh)	2029		67	130	122			
Generation (GWh)	FG			135		121	103	91
Surplus (%)	2027		6 %	13 %				
Surplus (%)	2029		2 %	5 %	8 %			
Surplus (%)	FG			3 %		12 %	24 %	33 %
Curtailment (%)	2027		3 %	4 %				
Curtailment (%)	2029		1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		2 %	1 %	3 %			
Constraint (%)	FG			2 %		1 %	1 %	1 %
Total Dispatch Down (%)	2027		12 %	20 %				
Total Dispatch Down (%)	2029		5 %	9 %	14 %			
Total Dispatch Down (%)	FG			6 %		15 %	28 %	36 %

Table 2-62 - Surplus, Curtailment and Constraint for Wind non-priority for Node Kellymount

Area H2	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)	71	
Available Energy (GWh)	2029 (pro-rata)	71	
Available Energy (GWh)	FG (pro-rata)		143
Generation (GWh)	2027 (GF)	61	
Generation (GWh)	2029 (pro-rata)	68	
Generation (GWh)	FG (pro-rata)		121
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		12 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	6 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	4 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-63 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Kellymount

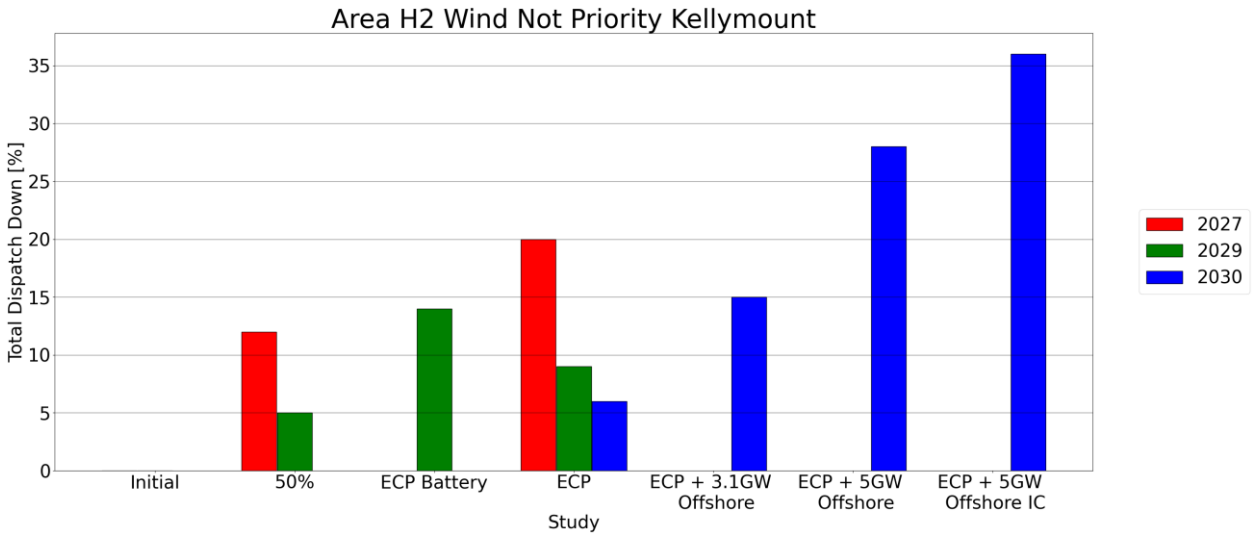

Figure 2-42 - Total Dispatch Down for Wind not priority for Node Kellymount

2.17 Kilkenny

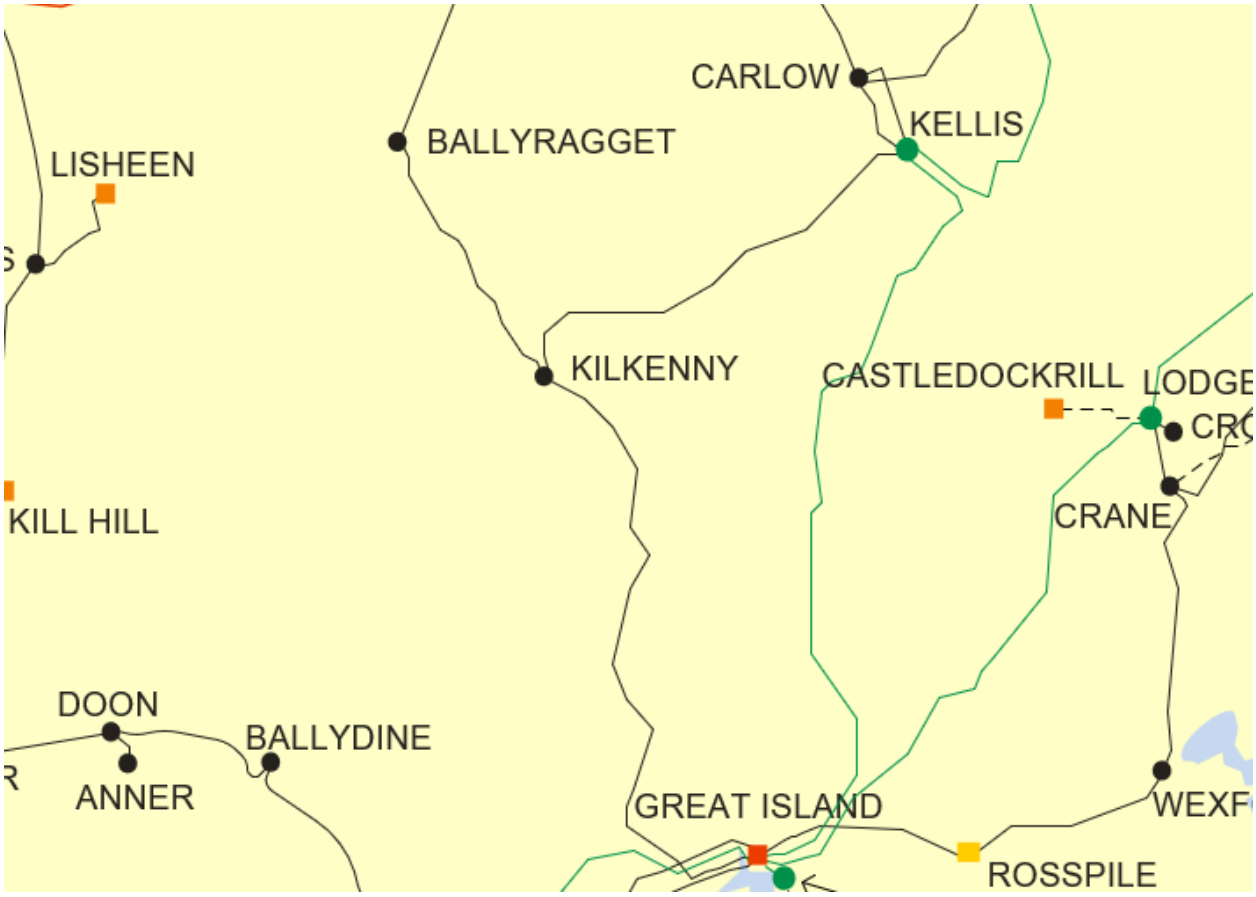

Figure 2-43 - Location of node Kilkenny

Generator	SO	Capacity	Type	Status
Ballytobin Solar PV	DSO	4.0	solar not priority	due to connect
Castlekelly Solar PV Farm	DSO	4.0	solar not priority	due to connect
Keatingstown Solar Farm	DSO	6.0	solar not priority	due to connect
Clashwilliam Solar	DSO	44.0	solar not priority	due to connect
Thomastown Road Solar	DSO	4.0	solar not priority	due to connect

Table 2-64 - Generation Included in Study for Node Kilkenny

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	14	38	62				
Installed Capacity (MW)	2029	14	38	62	62			
Installed Capacity (MW)	FG			62		62	62	62
Available Energy (GWh)	2027	16	44	73				
Available Energy (GWh)	2029	16	44	73	73			
Available Energy (GWh)	FG			73		73	73	73
Generation (GWh)	2027	16	39	56				
Generation (GWh)	2029	16	41	62	53			
Generation (GWh)	FG			65		62	58	54
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-65 - Surplus, Curtailment and Constraint for Solar non-priority for Node Kilkenny

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	38	
Installed Capacity (MW)	2029 (pro-rata)	38	
Installed Capacity (MW)	FG (pro-rata)		62
Available Energy (GWh)	2027 (GF)	44	
Available Energy (GWh)	2029 (pro-rata)	44	
Available Energy (GWh)	FG (pro-rata)		73
Generation (GWh)	2027 (GF)	39	
Generation (GWh)	2029 (pro-rata)	42	
Generation (GWh)	FG (pro-rata)		62
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-66 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Kilkenny

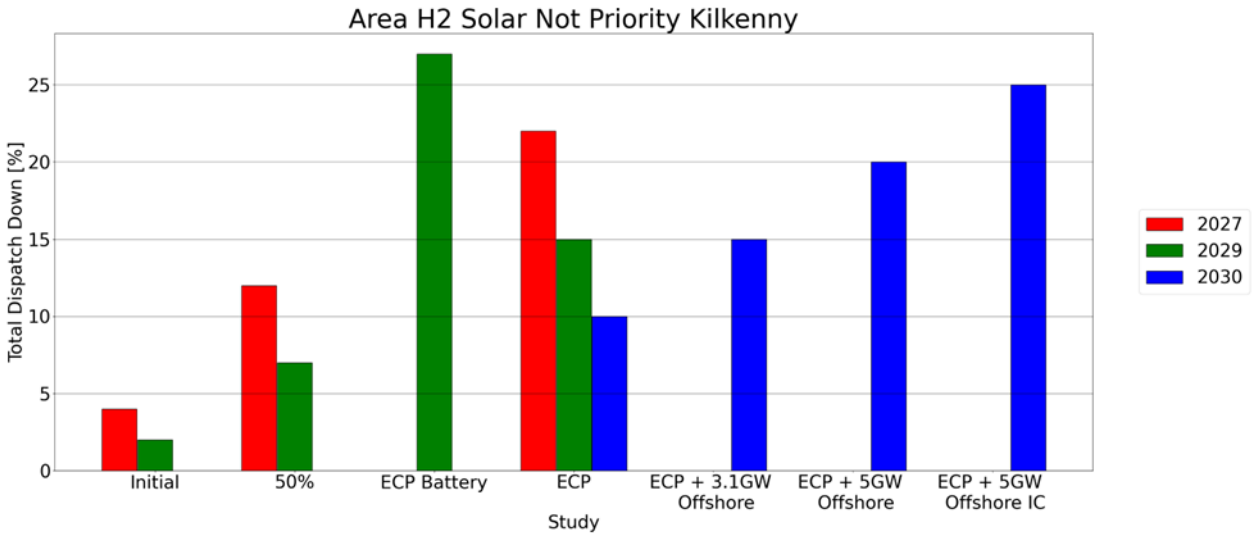

Figure 2-44 - Total Dispatch Down for Solar not priority for Node Kilkenny

2.18 Kilvinoge

Figure 2-45 - Location of node Kilvinoge

Generator	SO	Capacity	Type	Status
Castlebanny Wind Farm	TSO	138.6	wind not priority	due to connect

Table 2-67 - Generation Included in Study for Node Kilvinoge

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		69	139				
Installed Capacity (MW)	2029		69	139	139			
Installed Capacity (MW)	FG			139		139	139	139
Available Energy (GWh)	2027		196	392				
Available Energy (GWh)	2029		196	392	392			
Available Energy (GWh)	FG			392		392	392	392
Generation (GWh)	2027		173	314				
Generation (GWh)	2029		186	356	336			
Generation (GWh)	FG			370		333	284	250
Surplus (%)	2027		6 %	13 %				
Surplus (%)	2029		2 %	5 %	8 %			
Surplus (%)	FG			3 %		12 %	24 %	33 %
Curtailment (%)	2027		3 %	4 %				
Curtailment (%)	2029		1 %	2 %	3 %			
Curtailment (%)	FG			1 %		2 %	2 %	3 %
Constraint (%)	2027		3 %	3 %				
Constraint (%)	2029		2 %	1 %	3 %			
Constraint (%)	FG			2 %		1 %	1 %	1 %
Total Dispatch Down (%)	2027		12 %	20 %				
Total Dispatch Down (%)	2029		5 %	9 %	14 %			
Total Dispatch Down (%)	FG			6 %		15 %	28 %	36 %

Table 2-68 - Surplus, Curtailment and Constraint for Wind non-priority for Node Kilvinoge

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	69	
Installed Capacity (MW)	2029 (pro-rata)	69	
Installed Capacity (MW)	FG (pro-rata)		139
Available Energy (GWh)	2027 (GF)	196	
Available Energy (GWh)	2029 (pro-rata)	196	
Available Energy (GWh)	FG (pro-rata)		392
Generation (GWh)	2027 (GF)	167	
Generation (GWh)	2029 (pro-rata)	188	
Generation (GWh)	FG (pro-rata)		334
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	2 %	
Surplus (%)	FG (pro-rata)		12 %
Curtailment (%)	2027 (GF)	3 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	6 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	15 %	
Total Dispatch Down (%)	2029 (pro-rata)	4 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-69 - Surplus, Curtailment and Constraint for Wind non-priority with sensitivity for Node Kilvinoge

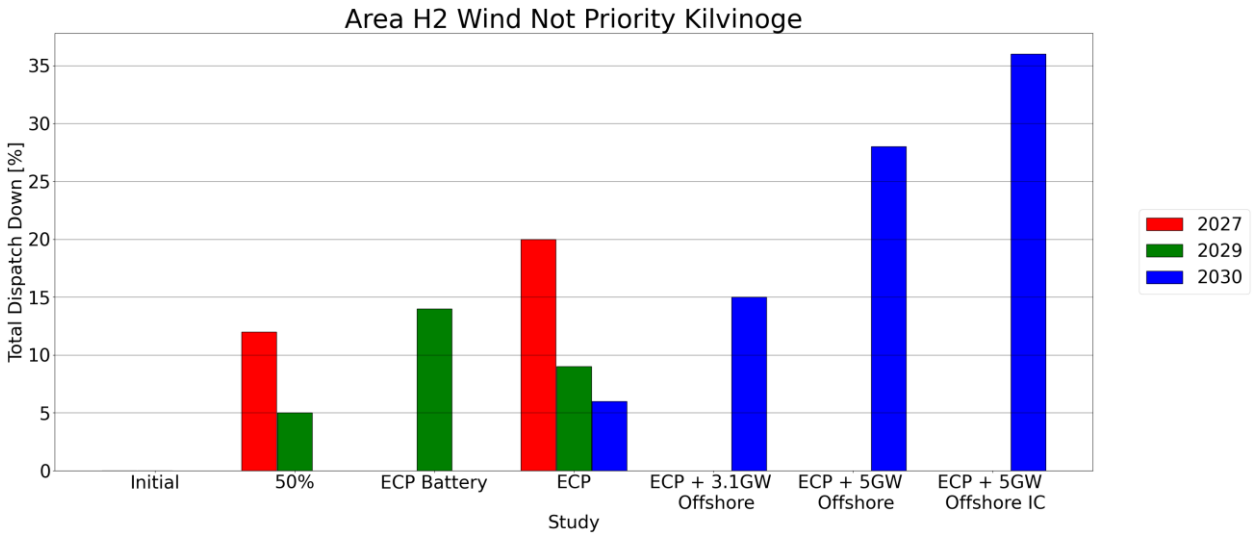

Figure 2-46 - Total Dispatch Down for Wind not priority for Node Kilvinoge

2.19 Lodgewood

Figure 2-47 - Location of node Lodgewood

Generator	SO	Capacity	Type	Status
Tincurry Solar Farm	TSO	109.0	solar not priority	due to connect

Table 2-70 - Generation Included in Study for Node Lodgewood

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		55	109				
Installed Capacity (MW)	2029		55	109	109			
Installed Capacity (MW)	FG			109		109	109	109
Available Energy (GWh)	2027		64	128				
Available Energy (GWh)	2029		64	128	128			
Available Energy (GWh)	FG			128		128	128	128
Generation (GWh)	2027		57	99				
Generation (GWh)	2029		60	108	93			
Generation (GWh)	FG			115		109	103	95
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027		2 %	5 %				
Curtailment (%)	2029		2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		4 %	4 %				
Constraint (%)	2029		2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027		12 %	22 %				
Total Dispatch Down (%)	2029		7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-71 - Surplus, Curtailment and Constraint for Solar non-priority for Node Lodgewood

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	55	
Installed Capacity (MW)	2029 (pro-rata)	55	
Installed Capacity (MW)	FG (pro-rata)		109
Available Energy (GWh)	2027 (GF)	64	
Available Energy (GWh)	2029 (pro-rata)	64	
Available Energy (GWh)	FG (pro-rata)		128
Generation (GWh)	2027 (GF)	57	
Generation (GWh)	2029 (pro-rata)	60	
Generation (GWh)	FG (pro-rata)		109
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-72 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Lodgewood

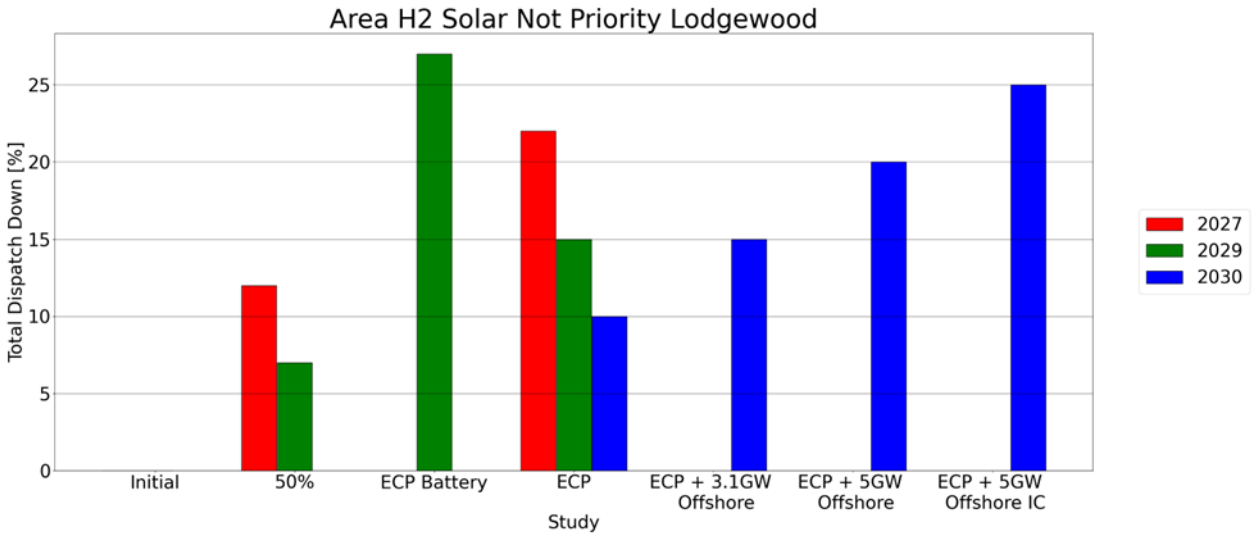

Figure 2-48 - Total Dispatch Down for Solar not priority for Node Lodgewood

2.20 Rosspile

Figure 2-49 - Location of node Rosspile

Generator	SO	Capacity	Type	Status
Rosspile Solar Farm	TSO	95.0	solar not priority	connected

Table 2-73 - Generation Included in Study for Node Rosspile

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	95	95	95				
Installed Capacity (MW)	2029	95	95	95	95			
Installed Capacity (MW)	FG			95		95	95	95
Available Energy (GWh)	2027	111	111	111				
Available Energy (GWh)	2029	111	111	111	111			
Available Energy (GWh)	FG			111		111	111	111
Generation (GWh)	2027	106	98	86				
Generation (GWh)	2029	109	104	94	81			
Generation (GWh)	FG			100		95	89	83
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-74 - Surplus, Curtailment and Constraint for Solar non-priority for Node Rosspile

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	95	
Installed Capacity (MW)	2029 (pro-rata)	95	
Installed Capacity (MW)	FG (pro-rata)		95
Available Energy (GWh)	2027 (GF)	111	
Available Energy (GWh)	2029 (pro-rata)	111	
Available Energy (GWh)	FG (pro-rata)		111
Generation (GWh)	2027 (GF)	98	
Generation (GWh)	2029 (pro-rata)	104	
Generation (GWh)	FG (pro-rata)		95
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-75 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Rosspile

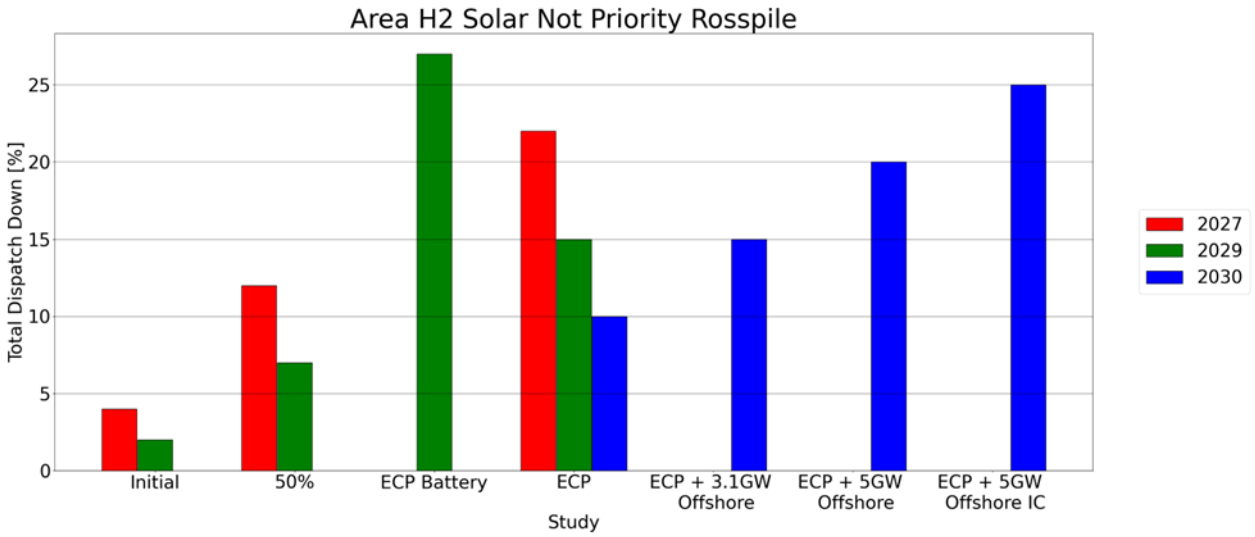

Figure 2-50 - Total Dispatch Down for Solar not priority for Node Rosspile

2.21 Stratford

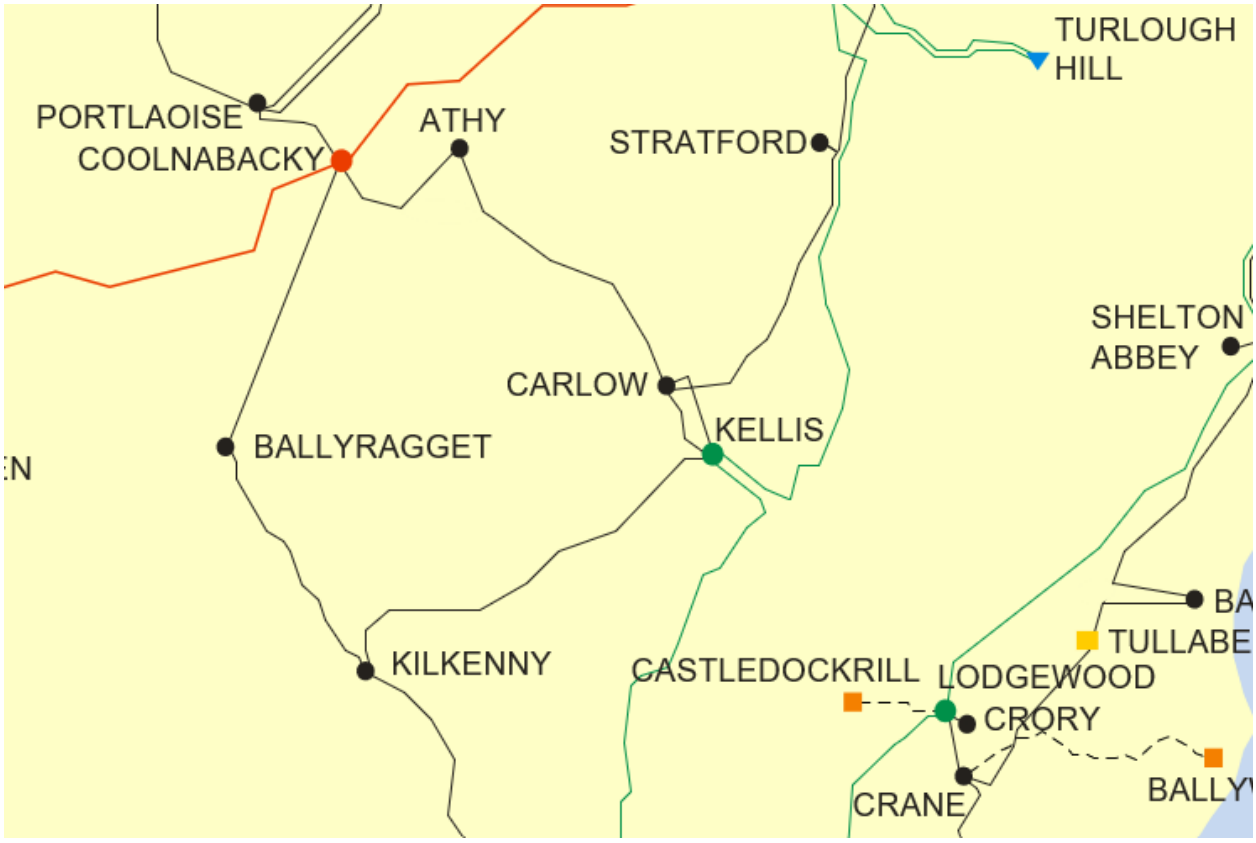

Figure 2-51 - Location of node Stratford

Generator	SO	Capacity	Type	Status
Golden Forth Solar Park	DSO	1.0	solar not priority	due to connect

Table 2-76 - Generation Included in Study for Node Stratford

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027		0	1				
Installed Capacity (MW)	2029		0	1	1			
Installed Capacity (MW)	FG			1		1	1	1
Available Energy (GWh)	2027		1	1				
Available Energy (GWh)	2029		1	1	1			
Available Energy (GWh)	FG			1		1	1	1
Generation (GWh)	2027		1	1				
Generation (GWh)	2029		1	1	1			
Generation (GWh)	FG			1		1	1	1
Surplus (%)	2027		6 %	14 %				
Surplus (%)	2029		3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	21 %
Curtailment (%)	2027		2 %	4 %				
Curtailment (%)	2029		1 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027		4 %	4 %				
Constraint (%)	2029		2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027		12 %	22 %				
Total Dispatch Down (%)	2029		7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	19 %	25 %

Table 2-77 - Surplus, Curtailment and Constraint for Solar non-priority for Node Stratford

Area H2	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)		1
Available Energy (GWh)	2027 (GF)	1	
Available Energy (GWh)	2029 (pro-rata)	1	
Available Energy (GWh)	FG (pro-rata)		1
Generation (GWh)	2027 (GF)	1	
Generation (GWh)	2029 (pro-rata)	1	
Generation (GWh)	FG (pro-rata)		1
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)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-78 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Stratford

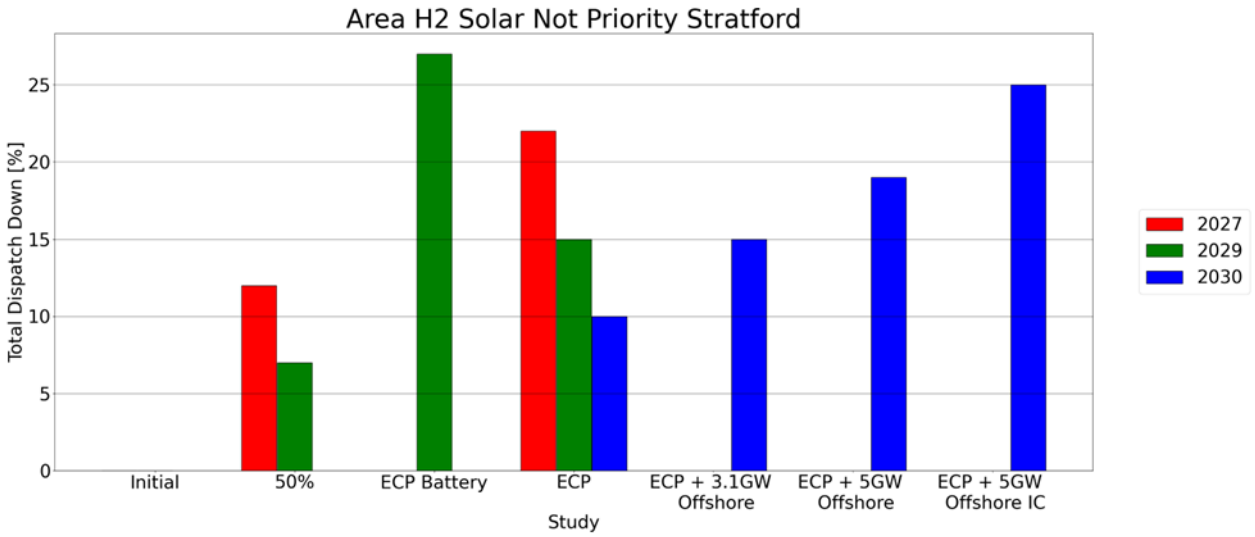

Figure 2-52 - Total Dispatch Down for Solar not priority for Node Stratford

2.22 Tullabeg

Figure 2-53 - Location of node Tullabeg

Generator	SO	Capacity	Type	Status
Tullabeg Solar Park	TSO	50.0	solar not priority	connected
Tullabeg Phase 2	TSO	105.0	solar not priority	due to connect
Tullabeg Phase 3	TSO	30.0	solar not priority	due to connect

Table 2-79 - Generation Included in Study for Node Tullabeg

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	50	118	185				
Installed Capacity (MW)	2029	50	118	185	185			
Installed Capacity (MW)	FG			185		185	185	185
Available Energy (GWh)	2027	59	138	217				
Available Energy (GWh)	2029	59	138	217	217			
Available Energy (GWh)	FG			217		217	217	217
Generation (GWh)	2027	56	121	168				
Generation (GWh)	2029	58	128	184	158			
Generation (GWh)	FG			195		184	174	162
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-80 - Surplus, Curtailment and Constraint for Solar non-priority for Node Tullabeg

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	118	
Installed Capacity (MW)	2029 (pro-rata)	118	
Installed Capacity (MW)	FG (pro-rata)		185
Available Energy (GWh)	2027 (GF)	138	
Available Energy (GWh)	2029 (pro-rata)	138	
Available Energy (GWh)	FG (pro-rata)		217
Generation (GWh)	2027 (GF)	121	
Generation (GWh)	2029 (pro-rata)	128	
Generation (GWh)	FG (pro-rata)		184
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2%	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15%

Table 2-81 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Tullabeg

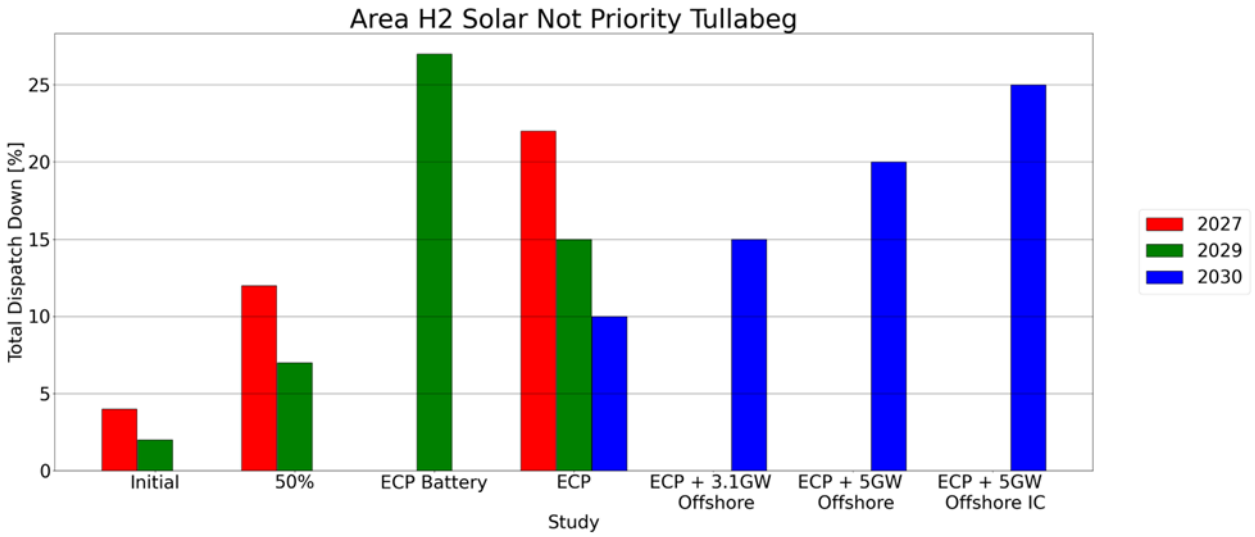

Figure 2-54 - Total Dispatch Down for Solar not priority for Node Tullabeg

2.23 Waterford

Figure 2-55 - Location of node Waterford

Generator	SO	Capacity	Type	Status
Ballymartin (1)	DSO	6.0	wind priority	connected
Rahora (1)	DSO	4.25	wind uncontrolled	connected
Ballymartin (2)	DSO	8.28	wind priority	connected
Curraghmartin Solar Park	DSO	3.99	solar not priority	connected
Farranmacedmond Solar Farm	DSO	6.0	solar not priority	due to connect

Table 2-82 - Generation Included in Study for Node Waterford

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	4	7	10				
Installed Capacity (MW)	2029	4	7	10	10			
Installed Capacity (MW)	FG			10		10	10	10
Available Energy (GWh)	2027	5	8	12				
Available Energy (GWh)	2029	5	8	12	12			
Available Energy (GWh)	FG			12		12	12	12
Generation (GWh)	2027	4	7	9				
Generation (GWh)	2029	5	8	10	9			
Generation (GWh)	FG			11		10	9	9
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-83 - Surplus, Curtailment and Constraint for Solar non-priority for Node Waterford

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	7	
Installed Capacity (MW)	2029 (pro-rata)	7	
Installed Capacity (MW)	FG (pro-rata)		10
Available Energy (GWh)	2027 (GF)	8	
Available Energy (GWh)	2029 (pro-rata)	8	
Available Energy (GWh)	FG (pro-rata)		12
Generation (GWh)	2027 (GF)	7	
Generation (GWh)	2029 (pro-rata)	8	
Generation (GWh)	FG (pro-rata)		10
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-84 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Waterford

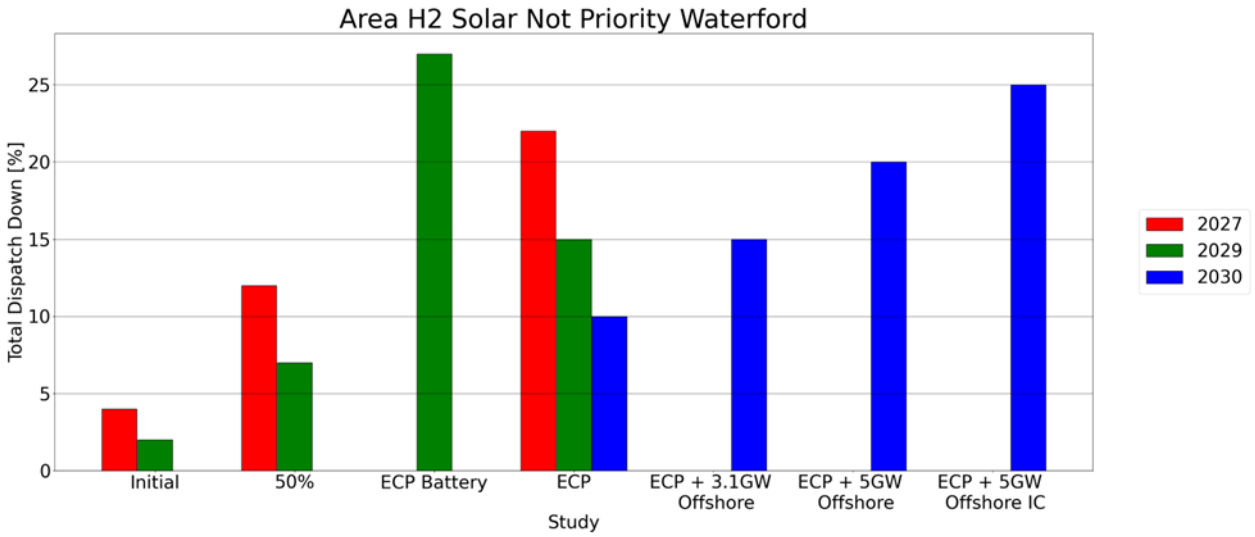

Figure 2-56 - Total Dispatch Down for Solar not priority for Node Waterford

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	14	14	14				
Installed Capacity (MW)	2029	14	14	14	14			
Installed Capacity (MW)	FG			14		14	14	14
Available Energy (GWh)	2027	40	40	40				
Available Energy (GWh)	2029	40	40	40	40			
Available Energy (GWh)	FG			40		40	40	40
Generation (GWh)	2027	39	38	37				
Generation (GWh)	2029	40	40	39	39			
Generation (GWh)	FG			40		39	39	38
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-85 - Surplus, Curtailment and Constraint for Wind priority for Node Waterford

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	14	
Installed Capacity (MW)	2029 (pro-rata)	14	
Installed Capacity (MW)	FG (pro-rata)		14
Available Energy (GWh)	2027 (GF)	40	
Available Energy (GWh)	2029 (pro-rata)	40	
Available Energy (GWh)	FG (pro-rata)		40
Generation (GWh)	2027 (GF)	39	
Generation (GWh)	2029 (pro-rata)	39	
Generation (GWh)	FG (pro-rata)		39
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-86 - Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Waterford

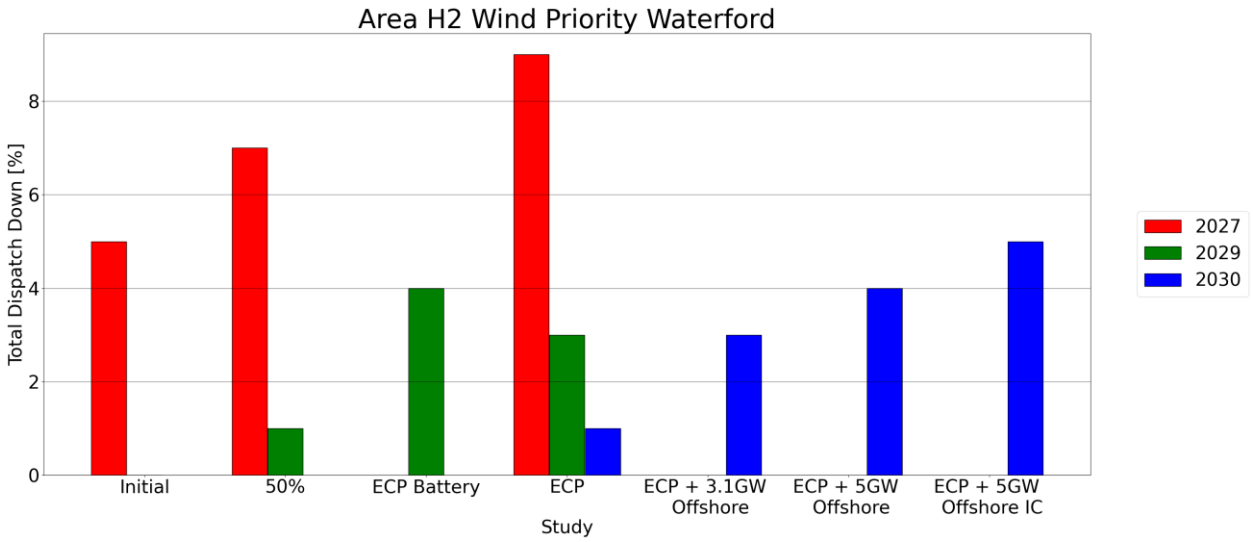

Figure 2-57 - Total Dispatch Down for Wind priority for Node Waterford

2.24 Wexford

Figure 2-58 - Location of node Wexford

Generator	SO	Capacity	Type	Status
Richfield (1)	DSO	20.25	wind priority	connected
Carnsore (1)	DSO	11.9	wind uncontrolled	connected
Richfield (2)	DSO	6.75	wind priority	connected
Blusheens Solar (1)	DSO	7.98	solar not priority	connected
Davidstown Solar	DSO	4.95	solar not priority	connected
Tracystown Solar	TSO	101.1	solar not priority	due to connect

Table 2-87 - Generation Included in Study for Node Wexford

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

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	13	63	114				
Installed Capacity (MW)	2029	13	63	114	114			
Installed Capacity (MW)	FG			114		114	114	114
Available Energy (GWh)	2027	15	74	134				
Available Energy (GWh)	2029	15	74	134	134			
Available Energy (GWh)	FG			134		134	134	134
Generation (GWh)	2027	14	65	104				
Generation (GWh)	2029	15	69	113	98			
Generation (GWh)	FG			120		114	107	100
Surplus (%)	2027	1 %	6 %	14 %				
Surplus (%)	2029	0 %	3 %	9 %	15 %			
Surplus (%)	FG			5 %		11 %	16 %	22 %
Curtailment (%)	2027	1 %	2 %	5 %				
Curtailment (%)	2029	0 %	2 %	3 %	5 %			
Curtailment (%)	FG			1 %		2 %	2 %	2 %
Constraint (%)	2027	3 %	4 %	4 %				
Constraint (%)	2029	1 %	2 %	3 %	7 %			
Constraint (%)	FG			4 %		2 %	2 %	1 %
Total Dispatch Down (%)	2027	4 %	12 %	22 %				
Total Dispatch Down (%)	2029	2 %	7 %	15 %	27 %			
Total Dispatch Down (%)	FG			10 %		15 %	20 %	25 %

Table 2-88 - Surplus, Curtailment and Constraint for Solar non-priority for Node Wexford

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	63	
Installed Capacity (MW)	2029 (pro-rata)	63	
Installed Capacity (MW)	FG (pro-rata)		114
Available Energy (GWh)	2027 (GF)	74	
Available Energy (GWh)	2029 (pro-rata)	74	
Available Energy (GWh)	FG (pro-rata)		134
Generation (GWh)	2027 (GF)	65	
Generation (GWh)	2029 (pro-rata)	69	
Generation (GWh)	FG (pro-rata)		114
Surplus (%)	2027 (GF)	6 %	
Surplus (%)	2029 (pro-rata)	3 %	
Surplus (%)	FG (pro-rata)		11 %
Curtailment (%)	2027 (GF)	2 %	
Curtailment (%)	2029 (pro-rata)	2 %	
Curtailment (%)	FG (pro-rata)		2 %
Constraint (%)	2027 (GF)	4 %	
Constraint (%)	2029 (pro-rata)	2 %	
Constraint (%)	FG (pro-rata)		2 %
Total Dispatch Down (%)	2027 (GF)	12 %	
Total Dispatch Down (%)	2029 (pro-rata)	7 %	
Total Dispatch Down (%)	FG (pro-rata)		15 %

Table 2-89 - Surplus, Curtailment and Constraint for Solar non-priority with sensitivity for Node Wexford

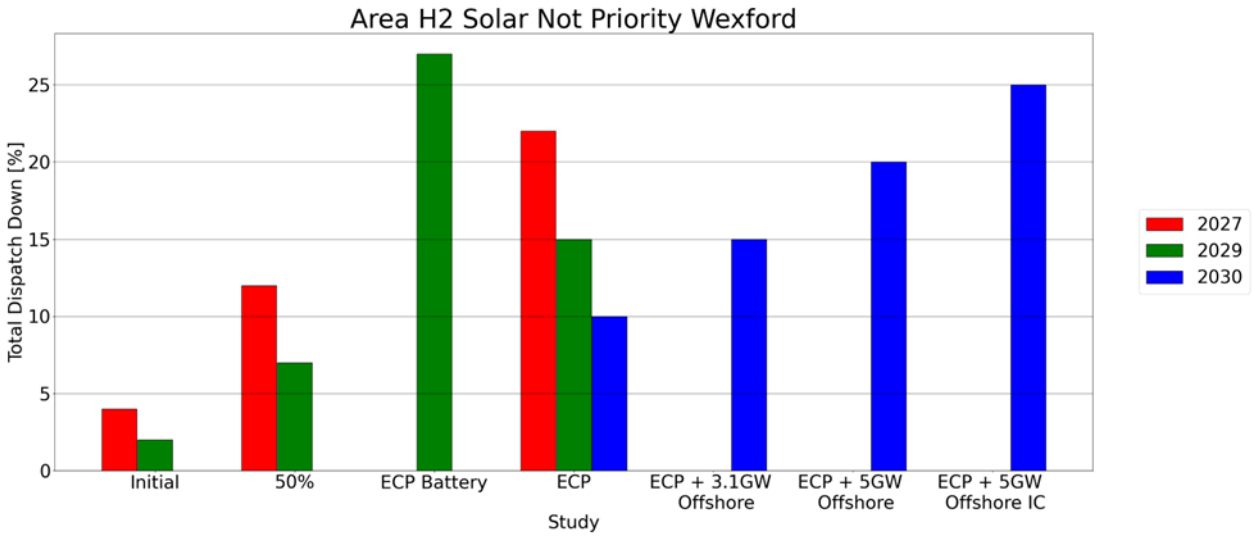

Figure 2-59 - Total Dispatch Down for Solar not priority for Node Wexford

The wind priority data is given in the following table.

Area H2	Year	Initial	50%	ECP	ECP Battery	ECP + 3.1GW Offshore	ECP + 5GW Offshore	ECP + 5GW Offshore IC
Installed Capacity (MW)	2027	27	27	27				
Installed Capacity (MW)	2029	27	27	27	27			
Installed Capacity (MW)	FG			27		27	27	27
Available Energy (GWh)	2027	76	76	76				
Available Energy (GWh)	2029	76	76	76	76			
Available Energy (GWh)	FG			76		76	76	76
Generation (GWh)	2027	73	71	69				
Generation (GWh)	2029	76	75	74	73			
Generation (GWh)	FG			76		74	73	73
Surplus (%)	2027	0 %	0 %	0 %				
Surplus (%)	2029	0 %	0 %	0 %	0 %			
Surplus (%)	FG			0 %		0 %	0 %	0 %
Curtailment (%)	2027	2 %	4 %	6 %				
Curtailment (%)	2029	0 %	1 %	3 %	4 %			
Curtailment (%)	FG			1 %		3 %	4 %	5 %
Constraint (%)	2027	3 %	3 %	3 %				
Constraint (%)	2029	0 %	0 %	0 %	0 %			
Constraint (%)	FG			0 %		0 %	0 %	0 %
Total Dispatch Down (%)	2027	5 %	7 %	9 %				
Total Dispatch Down (%)	2029	0 %	1 %	3 %	4 %			
Total Dispatch Down (%)	FG			1 %		3 %	4 %	5 %

Table 2-90 - Surplus, Curtailment and Constraint for Wind priority for Node Wexford

Area H2	Year	50%	ECP + 3.1GW Offshore
Installed Capacity (MW)	2027 (GF)	27	
Installed Capacity (MW)	2029 (pro-rata)	27	
Installed Capacity (MW)	FG (pro-rata)		27
Available Energy (GWh)	2027 (GF)	76	
Available Energy (GWh)	2029 (pro-rata)	76	
Available Energy (GWh)	FG (pro-rata)		76
Generation (GWh)	2027 (GF)	73	
Generation (GWh)	2029 (pro-rata)	74	
Generation (GWh)	FG (pro-rata)		74
Surplus (%)	2027 (GF)	0 %	
Surplus (%)	2029 (pro-rata)	0 %	
Surplus (%)	FG (pro-rata)		0 %
Curtailment (%)	2027 (GF)	4 %	
Curtailment (%)	2029 (pro-rata)	1 %	
Curtailment (%)	FG (pro-rata)		3 %
Constraint (%)	2027 (GF)	0 %	
Constraint (%)	2029 (pro-rata)	1 %	
Constraint (%)	FG (pro-rata)		0 %
Total Dispatch Down (%)	2027 (GF)	4 %	
Total Dispatch Down (%)	2029 (pro-rata)	3 %	
Total Dispatch Down (%)	FG (pro-rata)		3 %

Table 2-91 - Surplus, Curtailment and Constraint for Wind priority with sensitivity for Node Wexford

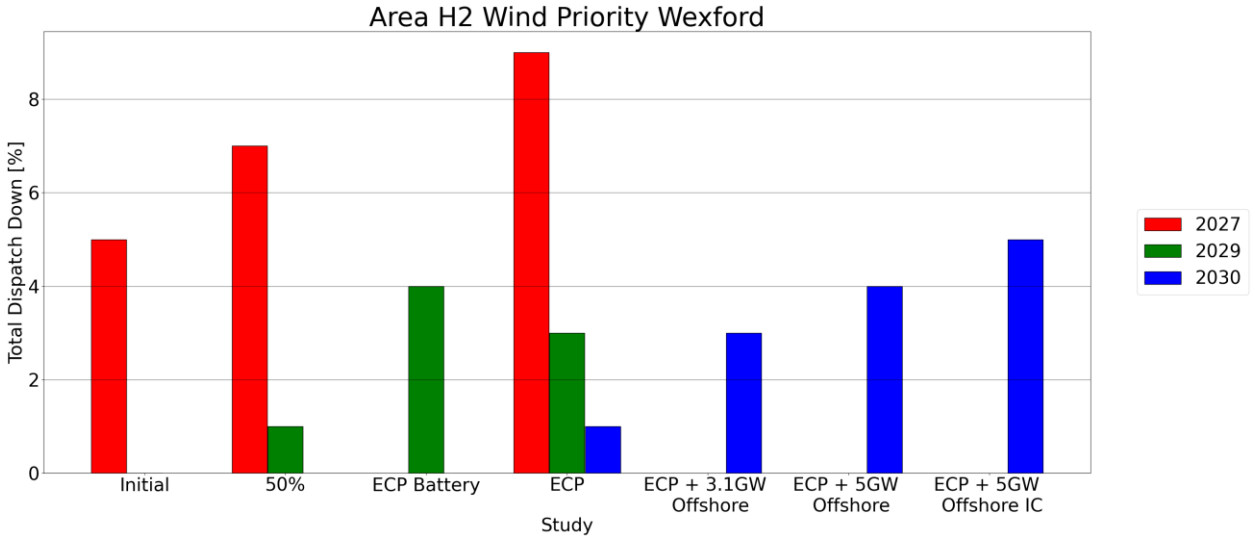

Figure 2-60 - Total Dispatch Down for Wind priority for Node Wexford