nationalgrid

Transmission Networks Connections Update

September 2015

Contents

Foreword

Welcome to the September 2015 Transmission Networks Connections Update. We are publishing this edition to provide an update based on the contracted background effective from 1 August 2015.

Amongst the continuing uncertainty for generation developers in relation to consenting, supply chain and financial markets we are able to report that future contracted generation remains high at a total of nearly 90GW planning to connect by 2026, a small increase from the previous edition. There is a trend for certain projects to move their connection dates within the next few years further out, possibly due to the results of the EMR capacity market auction, however, by 2020 the contracted capacity has increased to over 53GW with a 50% contribution from renewable projects.

Turning to current connected generation which was expected to remain stable for this edition and the tables in Chapter 6 confirm this view. However, this data is based on the contracted background of 1 August 2015 and does not include the results of the judicial review period for CUSC amendment proposal 213 which ran from the 21 August to 18 September. In this review period, TEC reduction notices could be made without the generator being liable for the Cancellation Charge. Therefore, to provide a comprehensive update we have included the table below showing the TEC reductions since 1 August until 18 September and this can be read in conjunction with the final table in Chapter 6 on page 41 to provide an overall view.

We expect to continuously review the format and content of this publication and, therefore, we're keen to hear your views. If you'd like to provide feedback then please send an email to the following address: transmissionconnections@nationalgrid.com, or alternatively, contact your Customer Account Manager directly. I hope you find the information contained within this publication of interest and I would like to take this opportunity to wish you all the best for both your current and future projects.

Best regards,

Nicola Paton
Head of Customer Service

The table below shows existing generation that has formally requested to reduce its contracted TEC (MW) position from 1 August 2015 until 18 September 2015

Company	Project Name	Fuel Type	MW Connected	MW Reduction	MW Total	Effective Date
An Suidhe Wind Farm Limited	An Suidhe Wind Farm	Wind Onshore	20.7	-1.4	19.3	01-Apr-2016
Centrica Energy Ltd	Barry Power Station	CCGT	235	-235	0	01-Apr-2016
Deeside Power (UK) Limited	Deeside Power Station	CCGT	260	-259	1	01-Apr-2016
Eggborough Power Ltd	Eggborough Power Station	Coal	1940	-1940	0	01-Apr-2016
Keadby Generation Limited	Ferrybridge Power Station	Coal	980	-980	0	01-Apr-2016
Keadby Generation Limited	Fiddlers Ferry Power Station	Coal	1953	-498	1455	01-Apr-2016
ScottishPower Renewables (UK) Limited	Harestanes Wind Farm	Wind Onshore	146	-21	125	01-Apr-2016
ScottishPower Generation Limited	Longannet Power Station	Coal	2260	-2260	0	01-Apr-2016
West Burton Ltd	West Burton B Power Station	CCGT	1332	-37	1295	01-Apr-2016
Nuclear Decommissioning Authority	Wylfa Power Station	Nuclear	450	-450	0	01-Apr-2016
Total MW				**-6681.4**		

1 Introduction

Purpose

The main purpose of this document is to assist existing and prospective users of the National Grid Electricity Transmission System (NETS) in assessing the connection opportunities available. The information contained within relates to the contracted status of future and existing generation as at 1 August 2015. We do not intend to draw any conclusions on the future completion of the generation projects detailed within this document.

Customer seminars

Our customer seminars provide a great opportunity to meet with industry colleagues, find out more about industry developments and discuss issues relating to a variety of topics. They are regularly attended by over 100 customers and stakeholders.

This document was prepared so that it is available and current for our autumn seminars in Warwick and Glasgow, on 1 and 6 October respectively. The dates and venues for the next seminars have not yet been confirmed and will be advertised nearer the time.

As always, if there are any topics you'd like to see covered please let us know. In the meantime, if you'd like to be added to our contact list for seminars, please contact the email address below:
transmissionconnections@nationalgrid.com

Should you have any questions regarding the forthcoming seminars, please do not hesitate to contact Bridget Kerr, our seminar co-ordinator, on 01926 655892.

Material from previous seminars can be found on our website via the following link: (please scroll to the bottom of the web page)
http://www2.nationalgrid.com/UK/Services/electricity-connections/

You will also find that our Electricity Ten Year Statement (ETYS) complements this document, illustrating the potential development over time of the NETS by considering a range of future energy scenarios. Information on the ETYS and the Future Energy Scenarios can be found via the following links:
http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Electricity-Ten-Year-Statement/

http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Future-Energy-Scenarios/

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Connection timescales

This section provides an indication of the likely connection dates that we would currently expect to offer to connection applications in various geographical locations around the country.

Please note that these are indicative only and are subject to confirmation on a case by case basis. We welcome the opportunity to discuss your connection aspirations ahead of any formal application.

To discuss your project in more detail please contact either your Customer Account Manager or our Electricity Customer Team (Telephone number 01926 654634).

The shaded map shown below may be found in the current version of the ETYS – see chapter 4.9. http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Electricity-Ten-Year-Statement/

Illustrative connection timescales – Likely connection dates

SHE Transmission
2017–2020
Varies across the network
Lots of embedded
Often Grid Supply Point reinforcements needed

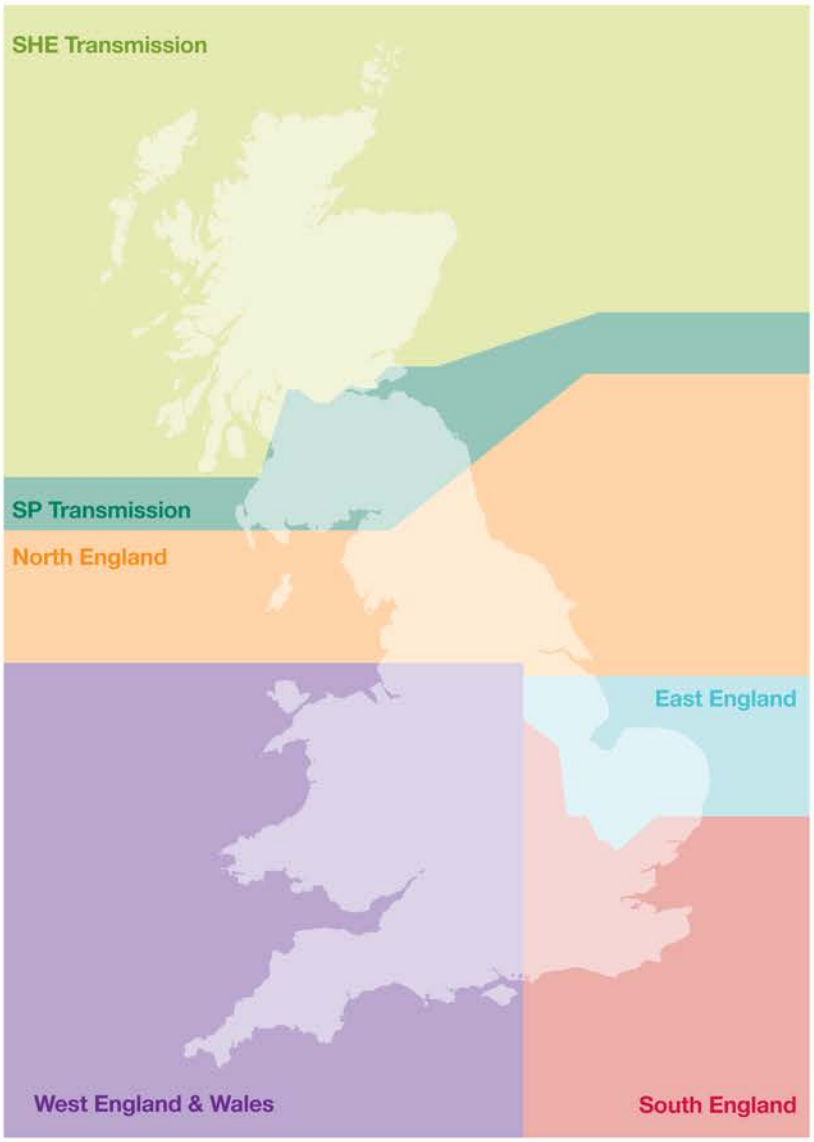
SP Transmission
2015–2020
Varies across the network
Lots of embedded
Often Grid Supply Point reinforcements needed

North England
2016–2020
Less connection applications than further north

East England
Large projects later than **2020**

West England & Wales
2016–2023
Mix of enabling and wider works depending on issues

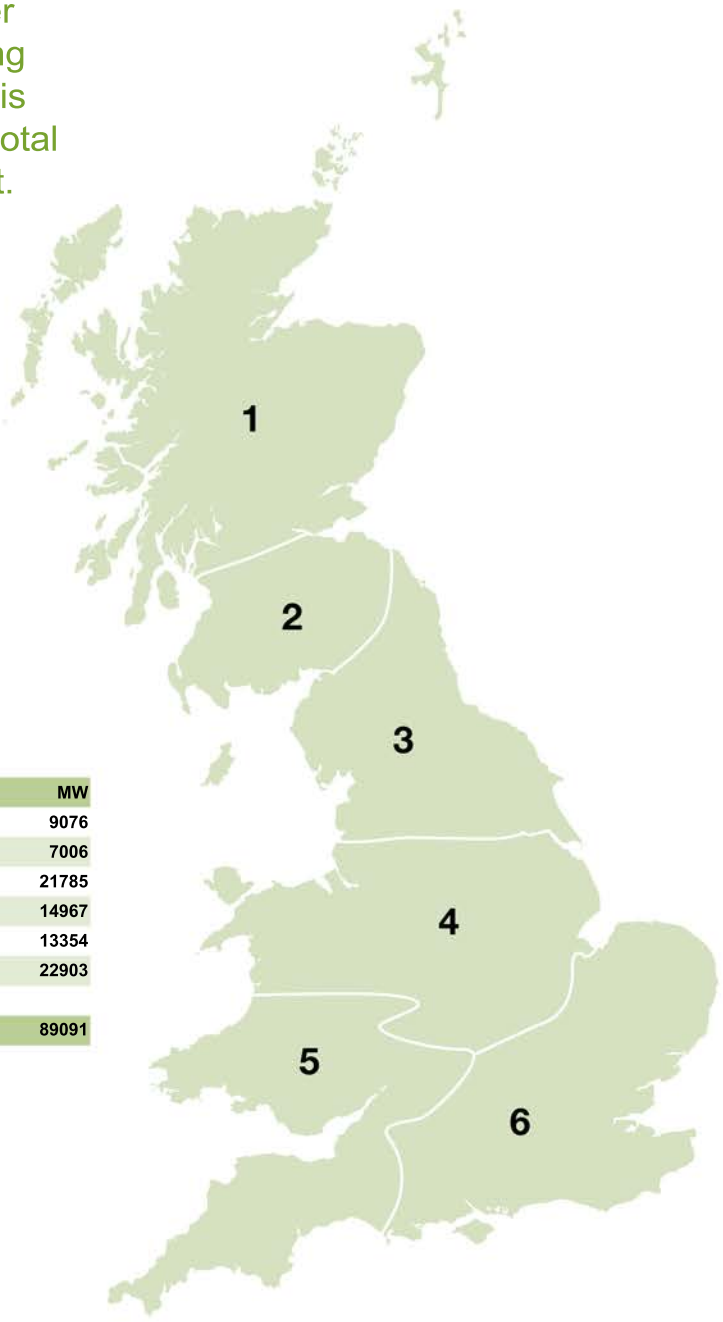
South England
2020 onwards
For generation
2018–2028
For interconnectors



Connections by area

The map below shows the volume of generation contracted to be connected by area. Further project specific details can be found in this document in Section 5: Connection locations.

Scotland has the largest number of projects in the UK, contributing 58% of the projects, however this only accounts for 18.1% of the total MWs generation due to connect.



Activity areas map

Area	Map Area	No. of Projects	MW
1	Northern Scotland	80	9076
2	Southern Scotland	74	7006
3	Northern England	38	21785
4	Central England & North Wales	18	14967
5	South West England & South Wales	16	13354
6	South East England	40	22903
Totals		266	89091

3
GB projects by year

3
GB projects by year

This section sets out summary statistics on new generation connections.

Contracted overall position

The data in the table below shows the amount of generation contracted to connect by 2026 within Great Britain, split by renewable generation, non-renewable generation, nuclear generation and interconnectors. This information has been taken from both the TEC Register and the Interconnector Register which can be found via the following link: http://www2.nationalgrid.com/UK/Services/Electricity-connections/Industry-products/TEC-Register/

The figures in the second table are cumulative. Where a figure has been repeated, it shows that there is no new contracted generation within that particular year. A negative (-) value shows where generation has reduced its MW TEC value.

Renewable fuel types: Biomass, Hydro, Tidal, Wave, Wind Onshore, Wind Offshore and Pump Storage.

Sum of contracted generation (MW total per year)

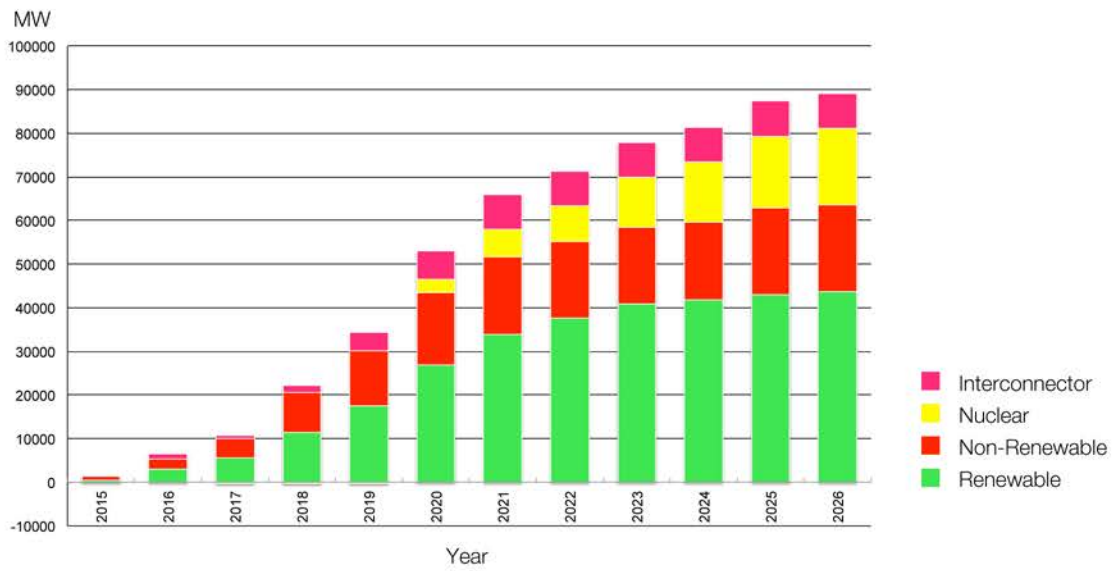
Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Renewable	535	2426	2545	6034	5899	9469	6979	3647	3339	1050	1200	600	43722
Non-Renewable	930	1527	2060	4411	3838	3719	1200	0	0	0	2162	0	19847
Nuclear	0	0	-200	0	0	3270	3340	1670	3270	2529	2529	1129	17537
Interconnector	0	1000	-215	1000	2400	2400	1400	0	0	0	0	0	7985
Total	**1465**	**4953**	**4190**	**11445**	**12137**	**18858**	**12919**	**5317**	**6609**	**3579**	**5891**	**1729**	**89091**

Sum of MW increase (cumulative MW)

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Renewable	535	2961	5506	11540	17439	26908	33887	37533	40872	41922	43122	43722
Non-Renewable	930	2457	4517	8928	12766	16485	17685	17685	17685	17685	19847	19847
Nuclear	0	0	-200	-200	-200	3070	6410	8080	11350	13879	16408	17537
Interconnector	0	1000	785	1785	4185	6585	7985	7985	7985	7985	7985	7985
Total	**1465**	**6418**	**10608**	**22053**	**34190**	**53048**	**65967**	**71283**	**77892**	**81471**	**87362**	**89091**

Note: no new contracted generation after 2026

Contracted future renewable and non-renewable generation



Long-term future GB contracted generation (to 2026)

By plant type

	Capacity (MW)	Plant Type	MW
Renewable	43722	Biomass	295
		Tidal	877
		Wave	40
		Wind Offshore	32691
		Wind Onshore	7707
		Pump Storage	2112
Non-Renewable	19847	Gas	20647
		Oil & AGT	-800
Nuclear	17537		17537
Interconnector	7985		7985
Total	**89091**		**89091**

By consents status

	Renewable	Non-Renewable	Nuclear	Interconnector	Total(MW)
Scoping	21768	2778	14397	13400	42343
Awaiting Consents	6930	7152	0	4800	18882
Consents Approved	13808	8396	3340	0	25544
Under Construction/Commissioning	1601	1707	0	0	3308
Built	-385	-186	-200	-215	-986
Total	**43722**	**19847**	**17537**	**7985**	**89091**

The table below shows future generation projects that have terminated their contracts since April 2015 and the effective date

Company	Project Name	Fuel Type	MW (TEC)	Termination Date

There were no terminations between the period of 1st April to 1st August

Over 89GW of generation is contracted to connect by 2026. This figure includes 43GW of renewable energy.

3
GB projects by year

Renewable projects status by year

The data in the table below shows the amount of renewable generation contracted to connect to the NETS and its current project status.

The chart displays the current position of total contracted renewable generation up until 2026. It can be seen that the vast majority of this renewable geration is in the Scoping stage (49%) and around 31% is consented.

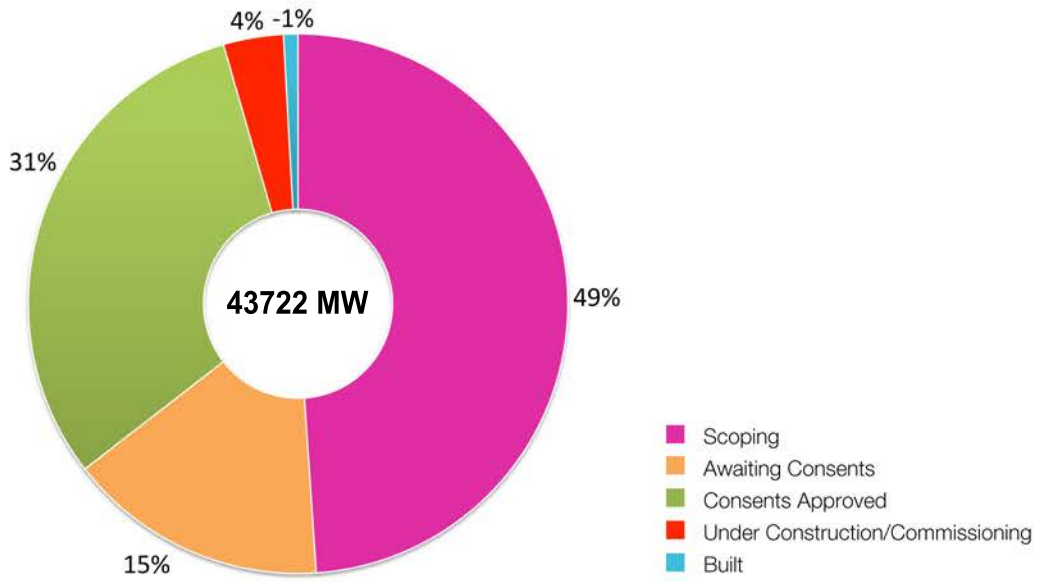
Definitions of project status:

- Scoping - project is still in the phase of preparing to submit data for consents
- Awaiting Consents - project's consents submission is being considered by the appropriate authority
- Consents Approved - project's consents submission to the appropriate authority has been approved
- Under Construction/Commisioning - the project is currently being built or is going through the commisioning phase
- Built - existing generation plant that is changing (increasing or decreasing) its contracted TEC (MW) value.

Current status of renewable MW increase by year to 2026

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Scoping	0	0	55	1924	848	5121	4761	2997	3264	1000	1200	600	21768
Awaiting Consents	0	133	269	782	1369	2496	1112	645	75	50	0	0	6930
Consents Approved	234	1378	2222	3329	3681	1853	1106	5	0	0	0	0	13808
Under Construction/ Commissioning	301	1300	0	0	0	0	0	0	0	0	0	0	1601
Built	0	-385	0	0	0	0	0	0	0	0	0	0	-385
Total	**535**	**2426**	**2545**	**6034**	**5899**	**9469**	**6979**	**3647**	**3339**	**1050**	**1200**	**600**	**43722**

Current status of contracted future renewable generation to 2026



Non-Renewable projects status by year – Excluding nuclear

The data in the table below shows the amount of non-renewable generation contracted to connect to the NETS and its current project status.

The chart displays the current position of total contracted non-renewable generation up until 2026. It can be seen that a large proportion of this generation is consented, while much of the remainder has submitted consent applications.

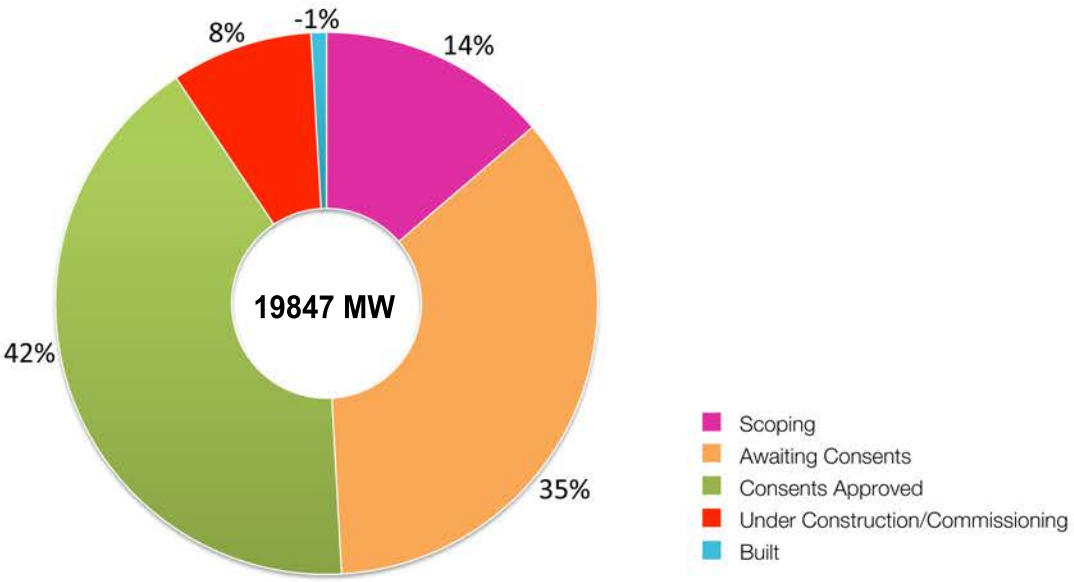
Definitions of project status:

- Scoping - project is still in the phase of preparing to submit data for consents
- Awaiting Consents - project's consents submission is being considered by the appropriate authority
- Consents Approved - project's consents submission to the appropriate authority has been approved
- Under Construction/Commisioning - the project is currently being built or is going through the commisioning phase
- Built - existing generation plant that is changing (increasing or decreasing) its contracted TEC (MW) value.

Current status of non-renewable MW increase by year to 2026

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Scoping	0	490	0	490	0	598	1200	0	0	0	0	0	2778
Awaiting Consents	0	710	0	1882	2398	0	0	0	0	0	2162	0	7152
Consents Approved	0	1200	500	2135	1440	3121	0	0	0	0	0	0	8396
Under Construction/ Commissioning	930	42	735	0	0	0	0	0	0	0	0	0	1707
Built	0	-915	825	-96	0	0	0	0	0	0	0	0	-186
Total	**930**	**1527**	**2060**	**4411**	**3838**	**3719**	**1200**	**0**	**0**	**0**	**2162**	**0**	**19847**

Current status of contracted future non-renewable generation to 2026



3
GB projects by year

Non-Renewable projects status by year – nuclear only

The data in the table below shows the amount of nuclear generation contracted to connect and its current project status up to 2026.

The chart below displays the significant quantity of 17.5GW of nuclear generation contracted to connect to the NETS by the end of 2026. Around 19% of this is consented.

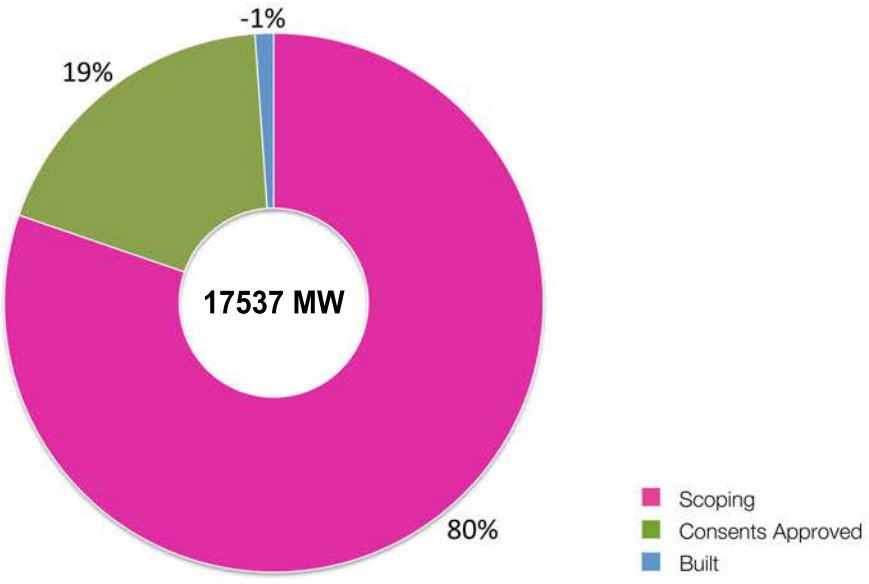
Definitions of projects status:

- Scoping – the project is still in the phase of preparing to submit data for consents
- Awaiting Consents – project's consents submission is being considered by the appropriate authority
- Consents Approved – project's consents submission to the appropriate authority has been approved
- Under Construction/Commissioning – the project is currently being built or is going through the commissioning phase
- Built – existing generation plant that is changing (increasing or decreasing) its contracted TEC (MW) value.

Current status of nuclear MW increase by year to 2026

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Scoping	0	0	0	0	0	3270	3340	0	1600	2529	2529	1129	14397
Consents Approved	0	0	0	0	0	0	0	1670	1670	0	0	0	3340
Built	0	0	-200	0	0	0	0	0	0	0	0	0	-200
Grand Total	**0**	**0**	**-200**	**0**	**0**	**3270**	**3340**	**1670**	**3270**	**2529**	**2529**	**1129**	**17537**

Current status of contracted future nuclear generation to 2026



Interconnector projects status by year

The data in the table below shows the amount of interconnector generation contracted to connect and its current project status up to 2026.

The chart below shows that the majority of this generation is in the Awaiting Consents stage.

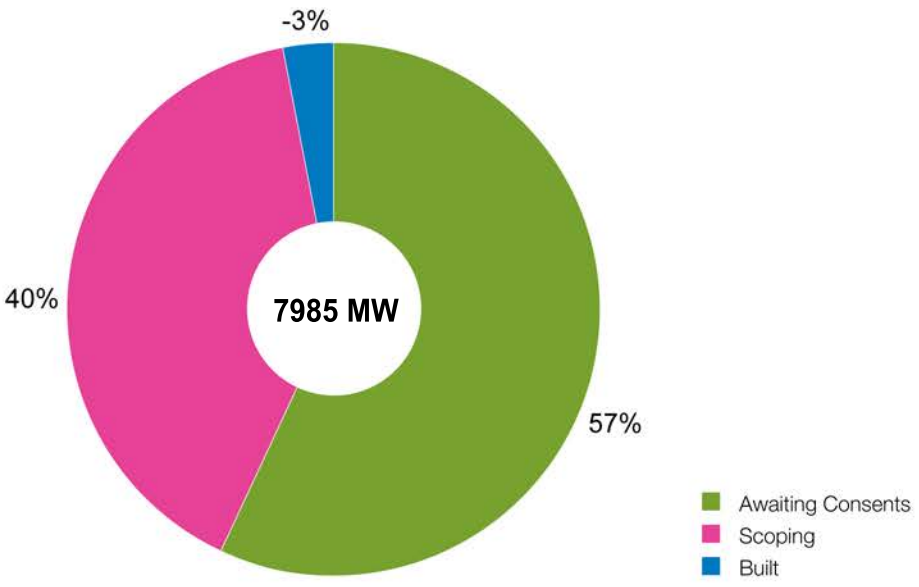
Definitions of projects status:

- Scoping – the project is still in the phase of preparing to submit data for consents
- Awaiting Consents – project's consents submission is being considered by the appropriate authority
- Consents Approved – project's consents submission to the appropriate authority has been approved
- Under Construction/Commissioning – the project is currently being built or is going through the commissioning phase
- Built – existing generation plant that is changing (increasing or decreasing) its contracted TEC (MW) value.

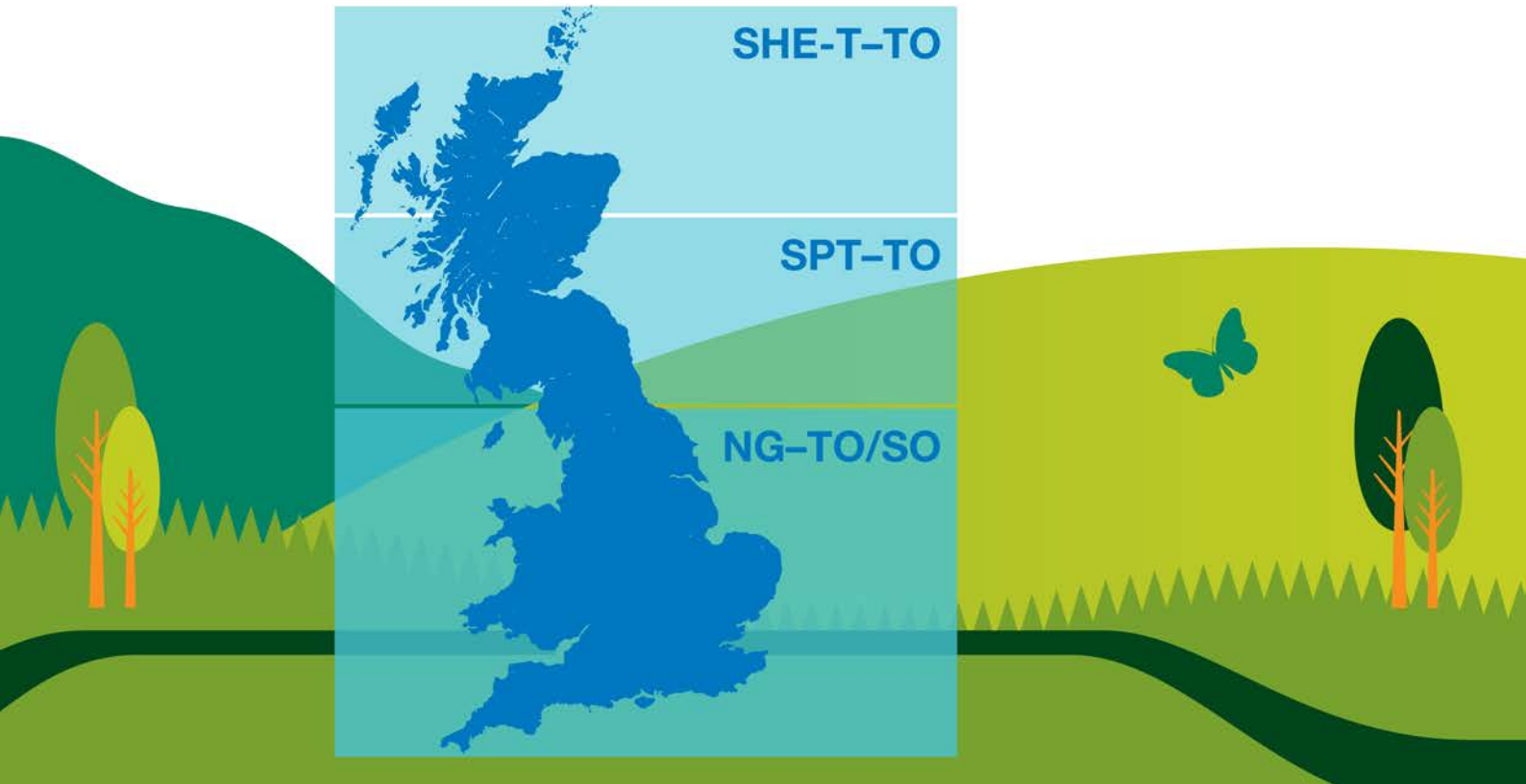
Current status of interconnector MW increase by year to 2026

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Scoping	0	0	0	0	1000	1000	1400	0	0	0	0	0	3400
Awaiting Consents	0	1000	0	1000	1400	1400	0	0	0	0	0	0	4800
Built	0	0	-215	0	0	0	0	0	0	0	0	0	-215
Grand Total	**0**	**1000**	**-215**	**1000**	**2400**	**2400**	**1400**	**0**	**0**	**0**	**0**	**0**	**7985**

Current status of contracted future interconnector generation to 2026



4
Additional data by transmission owner

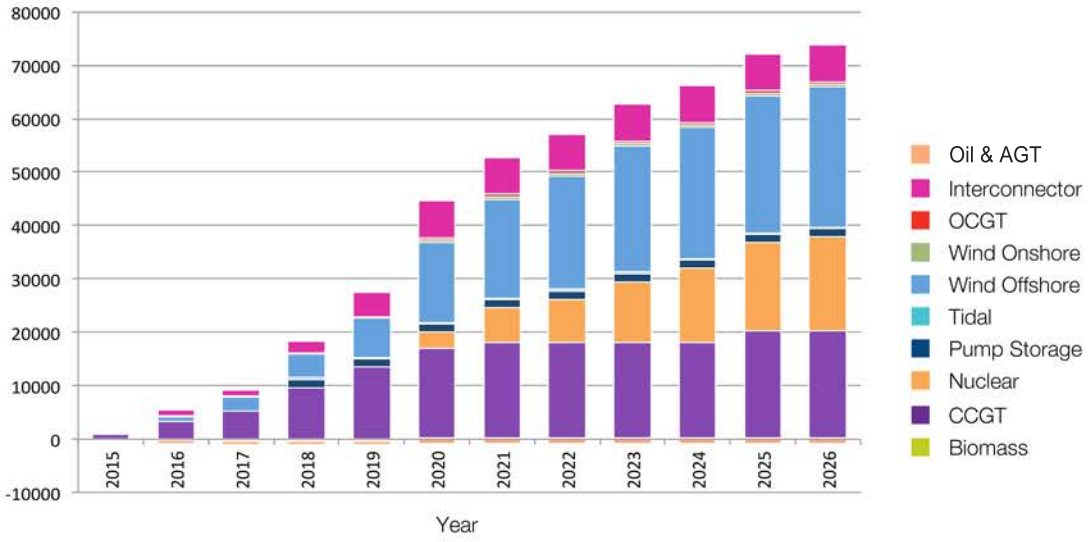


4 Additional data by transmission owner

National Grid Electricity Transmission plc – Plant type by year

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Biomass	0	-105	-105	-105	-105	295	295	295	295	295	295	295
CCGT	930	3257	5317	9728	13566	16687	17887	17887	17887	17887	20049	20049
Nuclear	0	0	-200	-200	-200	3070	6410	8080	11350	13879	16408	17537
Pump Storage	0	0	0	1500	1500	1500	1500	1500	1500	1500	1500	1500
Tidal	0	0	0	320	320	320	320	320	320	320	320	320
Wind Offshore	0	986	2553	4451	7207	14919	18487	21187	23487	24487	25687	26287
Wind Onshore	0	228	228	228	378	378	378	378	378	378	378	378
OCGT	0	0	0	0	0	598	598	598	598	598	598	598
Interconnector	0	1000	1000	2000	4400	6800	6800	6800	6800	6800	6800	6800
Oil & AGT	0	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800
Total	**930**	**4556**	**7993**	**17122**	**26266**	**43767**	**51875**	**56245**	**61815**	**65344**	**71235**	**72964**

Note: no new contracted generation after 2026

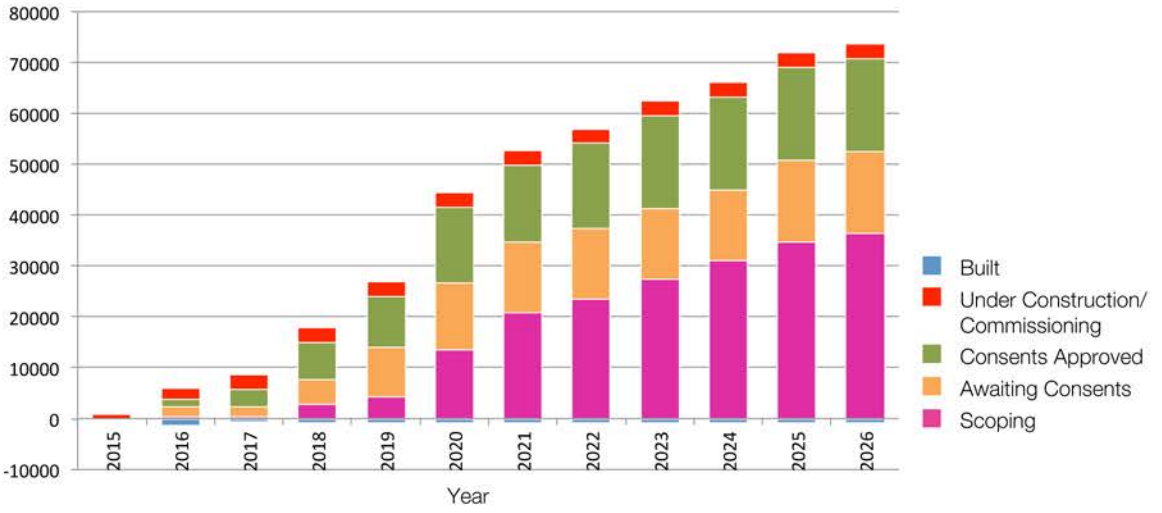


Currently 43GW of generation is contracted to connect by 2020, 38% of which are CCGT projects

National Grid Electricity Transmission plc – Consents status by year

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Scoping	0	490	490	2800	4310	13618	20858	23558	27458	30987	34716	36445
Awaiting Consents	0	1710	1710	4960	9758	13026	13894	13894	13894	13894	16056	16056
Consents Approved	0	1480	3547	7212	10048	14973	14973	16643	18313	18313	18313	18313
Under Construction/ Commissioning	930	2186	2921	2921	2921	2921	2921	2921	2921	2921	2921	2921
Built	0	-1300	-675	-771	-771	-771	-771	-771	-771	-771	-771	-771
Total	**930**	**4566**	**7993**	**17122**	**26266**	**43767**	**51875**	**56245**	**61815**	**65344**	**71235**	**72964**

Note: no new contracted generation after 2026



National Grid Electricity Transmission plc – Projects Under Construction/Commissioning

Company	Station Name	MW	Connection Date
Carrington Power Ltd	Carrington Power Station	910	2015
Marchwood Power Ltd	Marchwood	20	2015
DONG Energy Burbo Extension (UK) Ltd	Burbo Bank Extension Offshore Wind Farm	254	2016
Dudgeon Offshore Wind Ltd	Dudgeon Offshore Wind Farm	400	2016
Pen Y Cymoedd Wind Farm Ltd	Pen Y Cymoedd Wind Farm	228	2016
E.ON Climate & Renewables UK Rampion Offshore Wind Ltd	Rampion Offshore Wind Farm	332	2016
Sembcorp Utilities (UK) Ltd	Wilton	42	2016
Keadby Generation Ltd	Keadby	735	2017

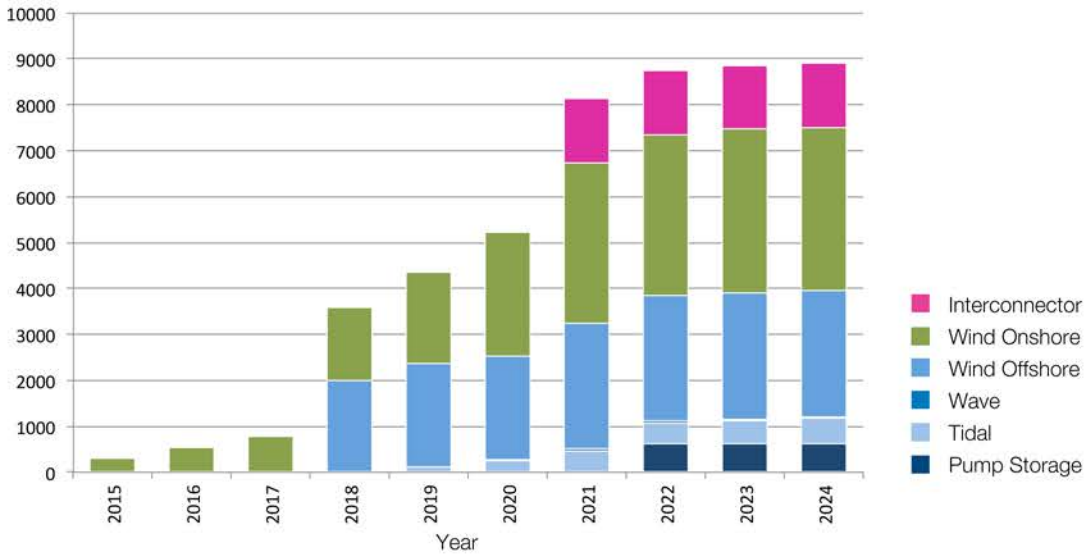
Note: The Connection Date represents the contracted completion date for the project and is subject to the generator successfully completing the compliance process and an Interim Operational Notification being issued to allow generation on to the NETS.

4 Additional data by transmission owner

Scottish Hydro Electric Transmission plc – Plant type by year

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Pump Storage	0	0	0	0	0	0	0	612	612	612
Tidal	0	0	10	25	111	259	467	467	507	557
Wave	0	0	0	0	10	20	40	40	40	40
Wind Offshore	0	0	0	400	2243	2243	2739	2739	2739	2739
Wind Onshore	266	491	987	1552	1964	2788	3545	3545	3728	3728
Interconnector	0	0	0	0	0	0	1400	1400	1400	1400
Total	**266**	**491**	**997**	**1977**	**4328**	**5310**	**8191**	**8803**	**9026**	**9076**

Note: no new contracted generation after 2024

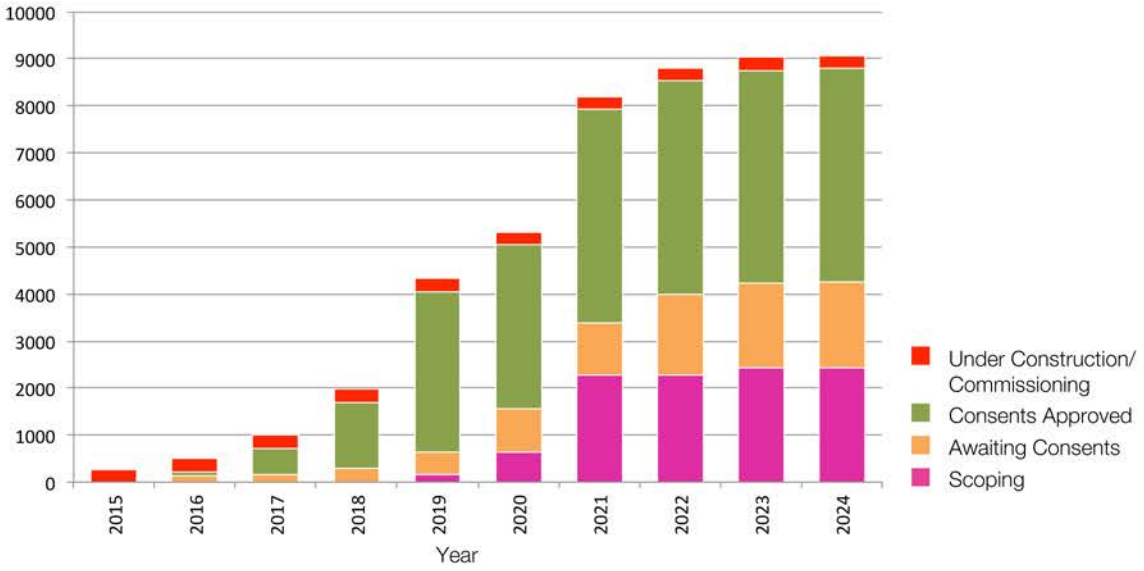


By 2020 5.3GW of generation is scheduled to have connected. 95% of this total is made up of offshore and onshore wind generation.

Scottish Hydro Electric Transmission plc – Consents status by year

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Scoping	0	0	0	0	165	645	2281	2281	2434	2434
Awaiting Consents	0	133	161	294	465	918	1101	1713	1783	1833
Consents Approved	0	86	563	1410	3425	3475	4536	4536	4536	4536
Under Construction/ Commissioning	266	273	273	273	273	273	273	273	273	273
Total	**266**	**491**	**997**	**1977**	**4328**	**5310**	**8191**	**8803**	**9026**	**9076**

Note: no new contracted generation after 2024



Scottish Hydro Electric Transmission plc – Projects Under Construction/Commissioning

Company	Station Name	MW	Connection Date
Corriegarth Wind Energy Limited	Corriegarth	50	2015
Corriegarth Wind Energy Limited	Corriegarth	19	2015
SSE Generation Ltd	Dunmaglass Wind Farm	94	2015
Carbon Free Moy Ltd	Moy Wind Farm	60	2015
A'Chruach Wind Farm Limited	A'Chruach Wind Farm	43	2015
A'Chruach Wind Farm Limited	A'Chruach Wind Farm	7	2016

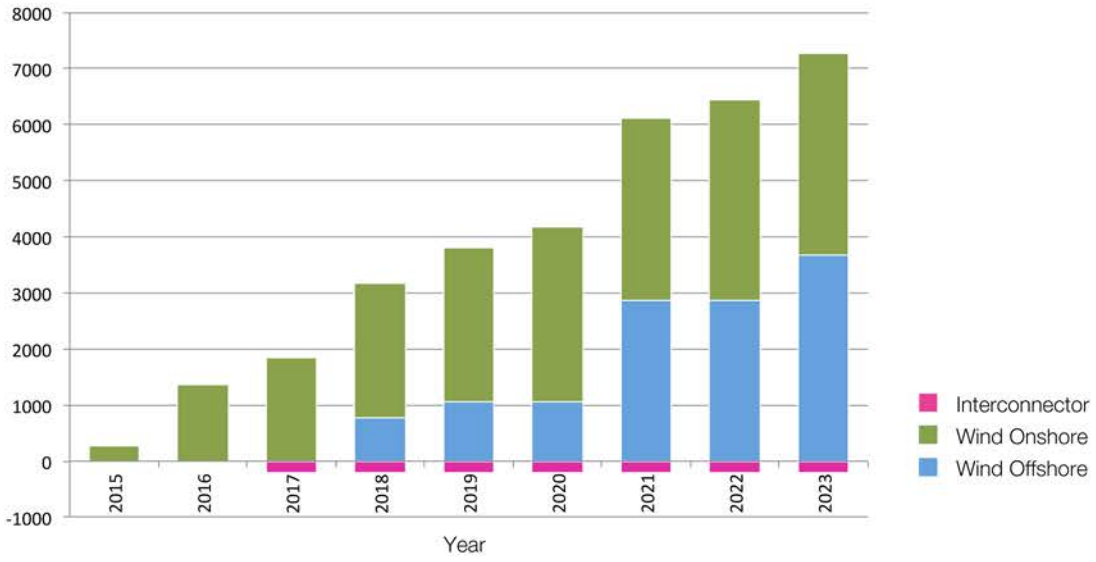
Note: The Connection Date represents the contracted completion date for the project and is subject to the generator successfully completing the compliance process and an Interim Operational Notification being issued to allow generation on to the NETS.

4 Additional data by transmission owner

Scottish Power Transmission Limited – Plant type by year

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023
Wind Offshore	0	0	0	780	1050	1050	2875	2875	3665
Wind Onshore	269	1361	1834	2389	2760	3136	3241	3575	3601
Interconnector	0	0	-215	-215	-215	-215	-215	-215	-215
Total	**269**	**1361**	**1619**	**2954**	**3595**	**3971**	**5901**	**6235**	**7051**

Note: no new contracted generation after 2023

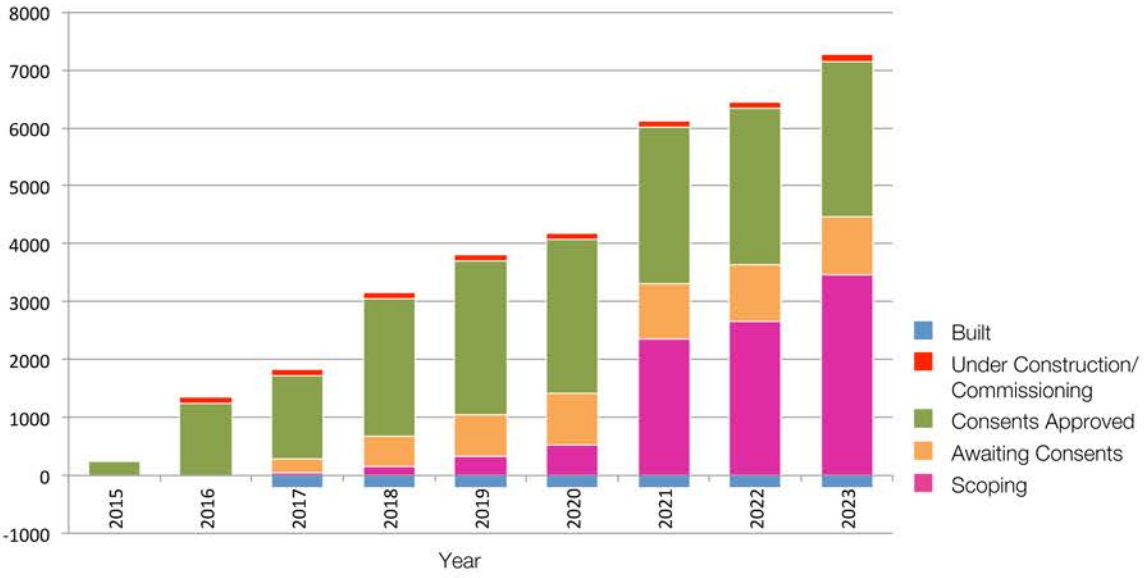


Of the 4GW contracted to connect by 2020, 66% of the projects have already achieved consent.

Scottish Power Transmission Limited – Consents status by year

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023
Scoping	0	0	55	158	332	532	2357	2654	3464
Awaiting Consents	930	0	241	521	719	895	955	988	993
Consents Approved	234	1247	1424	2375	2645	2645	2690	2695	2695
Under Construction/Commissioning	35	114	114	114	114	114	114	114	114
Built	0	0	-215	-215	-215	-215	-215	-215	-215
Total	**269**	**1361**	**1619**	**2954**	**3595**	**3971**	**5901**	**6235**	**7051**

Note: no new contracted generation after 2023



Scottish Power Transmission Limited – Projects Under Construction/Commissioning

Company	Station Name	MW	Connection Date
Andershaw Wind Power Limited	Andershaw Wind Farm	35	2015
Crystal Rig II Ltd	Crystal Rig 2	62	2016
ScottishPower Renewables (UK) Ltd	Harestanes Extension	17	2016

Note: The Connection Date represents the contracted completion date for the project and is subject to the generator successfully completing the compliance process and an Interim Operational Notification being issued to allow generation on to the NETS.

5
Connection locations

5
Connection locations

This section provides a breakdown by geographical location building upon the summary provided in Section 4.

The maps on the following pages indicate the location of generation projects. Each project is colour coded to show consents status and whether it is renewable, non-renewable, nuclear or an interconnector.

The project status is also shown in the table where the abbreviations refer to:

Abbreviation	Meaning
S	Scoping
AC	Awaiting Consents
CA	Consents Approved
UC	Under Construction/Commissioning
B	Existing Generation that is changing its contracted TEC (MW) value

The information within this section has been taken from the TEC Register and Interconnector Register (as at 01 August 2015). It therefore relates to projects which are either: directly connecting to the NETS and have entered into a Bilateral Connection Agreement (BCA) or, those that are embedded into a Distribution Network and have chosen to contract via a Bilateral Embedded Generation Agreement (BEGA) to enable their generation to participate in the Balancing Mechanism.

For the avoidance of doubt, the data used for the maps and tables within this section does not include projects which are listed on the Embedded Generation Register. Please refer to Section 7 for information pertaining to embedded generation projects.

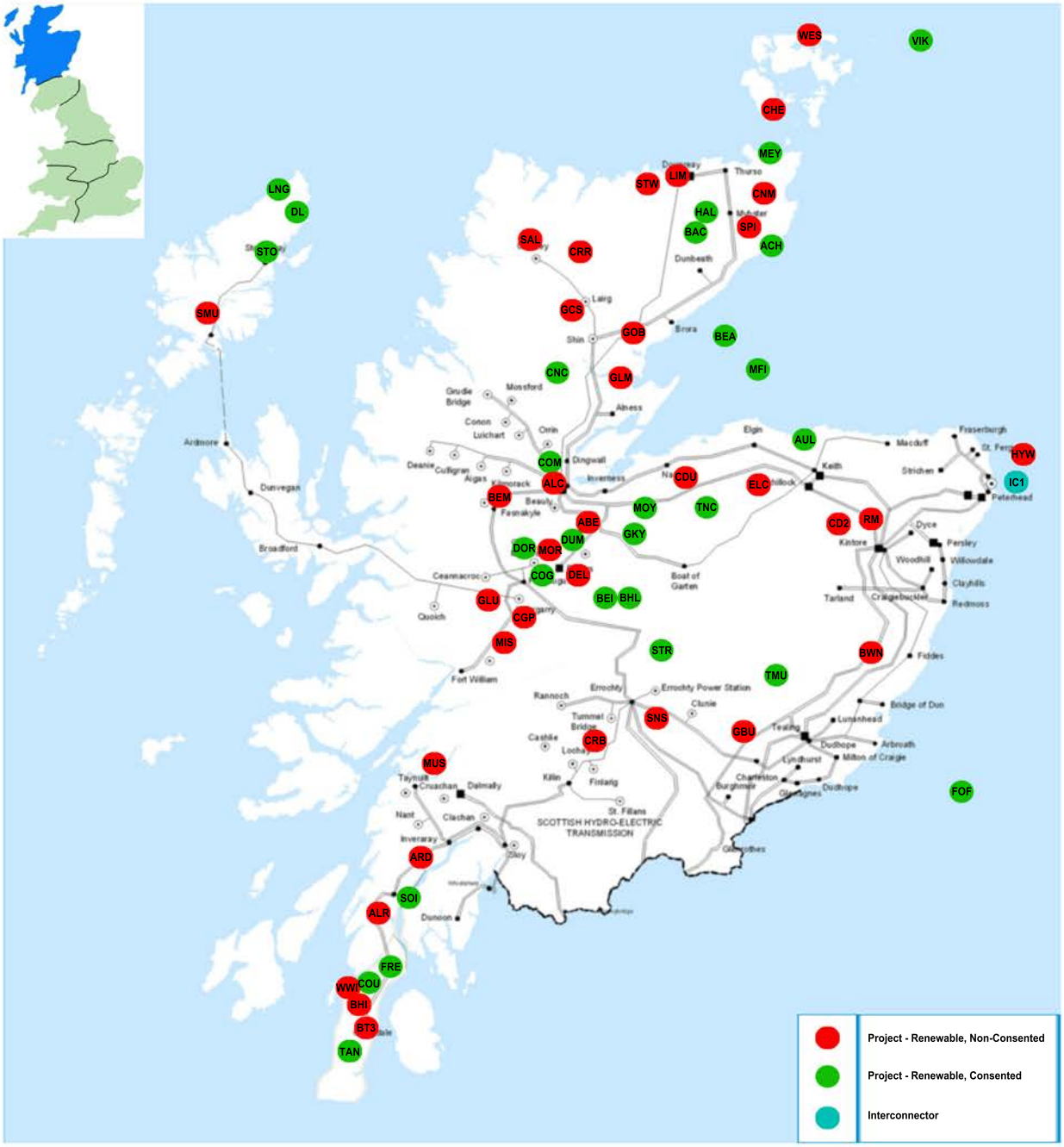
It can be seen that both Northern and Southern Scotland have by far the most projects contracted, though these tend to be relatively small in scale. Whereas in England & Wales there are considerably fewer projects, although a significant proportion of these are larger in scale and require major reinforcement of the network.

For more details on development of the NETS, please refer to our Electricity Ten Year Statement (ETYS).
http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Electricity-Ten-Year-Statement/

A revised ETYS is published in November of each year reflecting the current position and scenario planning.

Northern Scotland projects map

Northern Scotland has seen a substantial amount of relatively small renewable generation projects contracting for connections. A lack of existing transmission infrastructure means that many of these projects are dependent upon significant reinforcement, often subject to protracted and difficult planning applications.



5 Connection locations

Northern Scotland projects data

	Station Name	Connection Point	MW Increase	Connection Year	Status
ACH	A'Chruach Wind Farm	A'Chruach Wind Farm	43	2015	UC
	A'Chruach Wind Farm	A'Chruach Wind Farm	6.9	2016	UC
COG	Corriegarth	Corriegarth 132/33kV substation	49.9	2015	UC
	Corriegarth	Corriegarth 132/33kV substation	19.1	2015	UC
DUM	Dunmaglass Wind Farm	Beauly/Foyers	94	2015	UC
MOY	Moy Wind Farm	Inverness 132/33kV GSP	60	2015	UC
COU	Cour Wind Farm	Crossaig 132/33kV Substation	20.5	2016	CA
COM	Corriemoillie Wind Farm	Corriemoillie 132/33kV Substation	47.5	2016	CA
SNS	Strathy North and South Wind	Strathy North and Strathy South	132.6	2016	AC
TMU	Tullymurdoch Wind Farm	Coupar Angus	17.5	2016	CA
FRE	Freasdail	Crossaig 132kV Substation	22.2	2017	CA
BEM	Beinn Mhor Wind Farm	Fasnakyle	21	2017	AC
BEI	Beinneun Wind Farm	Beinneun 132/33kV substation	109	2017	CA
BHL	Bhlaraidh Wind Farm	Bhlaraidh 132/33kV	108	2017	CA
BWN	Brownieleys	Fiddes 132/33kV Substation	7.5	2017	AC
STR	Stronelairg	Stronelairg 132/33kV Substation	227.8	2017	CA
SOI	Sound of Islay Tidal	Islay	10	2017	CA
BEA	Beatrice Wind Farm	Beatrice 33/132kV Offshore Substations	20	2018	CA
	Beatrice Wind Farm	Beatrice 33/132kV Offshore Substations	380	2018	CA
	Beatrice Wind Farm	Beatrice 33/132kV Offshore Substations	264	2019	CA
DOR	Dorenell Wind Farm	Dorenell 132/33kV	220	2018	CA
AUL	Aultmore Wind Farm	Aultmore 132/33kV	29.5	2018	CA
MEY	MeyGen Tidal	Gills Bay	15	2018	CA
	MeyGen Tidal	Gills Bay	56	2019	CA
	MeyGen Tidal	Gills Bay	83	2020	AC
	MeyGen Tidal	Gills Bay	83	2021	AC
BAC	Bad a Cheo Wind Farm	Mybster 132/33kV	29.9	2018	CA
CNC	Coire Na Cloiche	Alness GSP	30	2018	CA
DEL	Dell Wind Farm	Dell 132/33kv Substation	42	2018	AC
GKY	Glen Kyllachy Wind Farm	Glen Kyllachy Wind Farm	48.5	2018	CA
MIS	Millennium South	Millennium South 132/33kV Substation	25	2018	AC
SAL	Sallachy Wind Farm	Sallachy 132kV Substation	66	2018	AC
TNC	Tom Na Clach	Tom Na Clach 132/33KV Substation	75	2018	CA
HAL	Halsary Wind Farm	Mybster 132/33kV Substation	28.5	2019	CA
MFI	Moray Firth Offshore Wind Farm		504	2019	CA
	Moray Firth Offshore Wind Farm		496	2021	CA
ABE	Aberarder Wind Farm	Aberarder 132/33Kv Substation	35.8	2019	S
SPI	Spittal Hill Wind Farm	Spittal Hill Wind Farm 132/33kV Substation	21	2019	AC
DL	Druim Leathann	Druim Leathann 132/33kV substation	39	2019	CA
LNG	Lag Na Greine Phase 1	Siadar	10	2019	CA
	Lag Na Greine Phase 2	Siadar	10	2020	CA
	Lag Na Greine Phase 3	Siadar	20	2021	CA
STO	Stornoway Wind Farm	Stornoway 132/33kV Substation	38.5	2019	CA
	Stornoway Wind Farm	Stornoway 132/33kV Substation	91.1	2021	CA
FOF	Firth of Forth Offshore Wind Farm 1A	Tealing 275/33kv	545	2019	CA
	Firth of Forth Offshore Wind Farm 1B	Tealing 275/33kvm 1B	530	2019	CA

Continued on next page

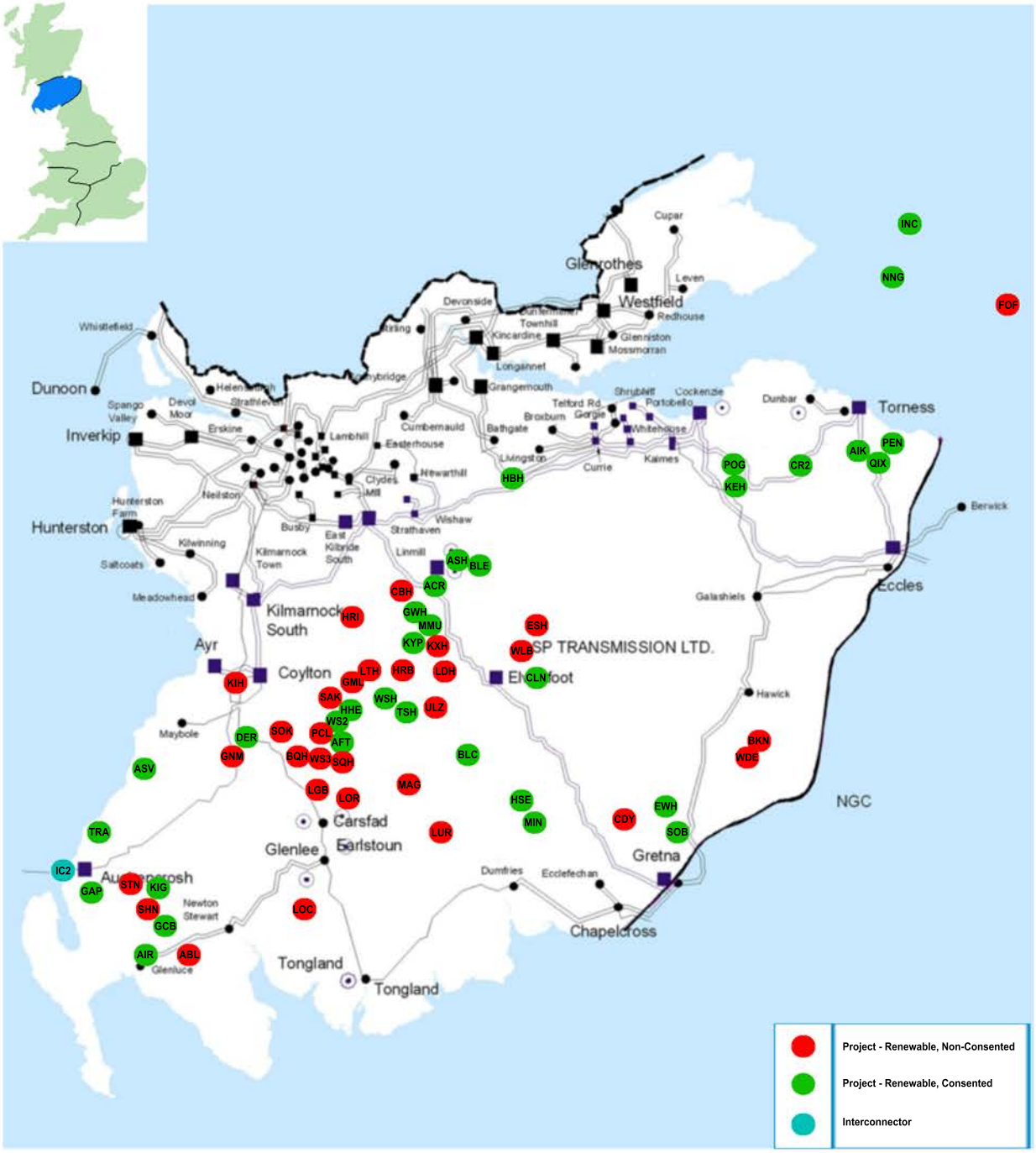
Northern Scotland projects data continued

	Station Name	Connection Point	MW increase	Connection Year	Status
CHE	Cantick Head	Bay of Skaill 132/33kV substation	30	2019	S
	Cantick Head	Bay of Skaill 132/33kV substation	65	2020	S
	Cantick Head	Bay of Skaill 132/33kV substation	65	2021	S
CRB	Crossburns Wind Farm	Crossburns 275/33kv	99	2019	S
SMU	South Muaitheabhal Wind Farm	Muaitheabhal 132/33kV Substation	150	2019	AC
GLM	Glenmorie Windfarm	Glenmorie 132kV/33kV substation	114	2020	AC
GBU	Green Burn Wind Farm	Coupar Angus	26	2020	S
ALC	Allt Carach	Allt Carach 132/33kV	75.9	2020	S
BT3	Beinn an Tuirc 3	Carradale 132/33kV Substation	50	2020	AC
BHI	Blary Hill Wind Farm	Carradale	35	2020	S
CDU	Cairn Duhie Wind farm	Cairn Duhie 275/33Kv Substation	59.7	2020	S
CNM	Cnoc Morail	Mybster	18.4	2020	S
CRR	Creag Riabhach Wind Farm	Creag Riabhach 132/33kV Substation	72.6	2020	S
GCS	Glencassley Wind Farm	Shin 33kV	65	2020	AC
GOB	Gordonbush Wind Farm Extension	Gordonbush	38	2020	S
LIM	Limekilns	Limekilns 132/33kV substation	90	2020	S
RM	Rothmaise Wind Farm	Rothiemorman	11.5	2020	AC
STW	Strathy Wood	Strathy Wood	84	2020	AC
TAN	Tangy III Wind Farm	Carradale	39.1	2020	CA
WWI	Willow Wind Farm	Willow Wind 132/33kV	45	2020	AC
VIK	Viking Wind Farm	Kergord	412	2021	CA
ALR	Alt Rhuba Wind Farm	Allt Rhuba 132/33kV	43.7	2021	S
MUS	Musdale Wind Farm	Musdale 132/33kV Substation	64	2021	S
MOR	Moriston Wind Farm	Moriston Wind Farm 132/33kV Substation	63	2021	S
WES	Westray South	Crook 132/33kV Substation	60	2021	AC
	Westray South	Crook 132/33kV Substation	40	2023	AC
	Westray South	Crook 132/33kV Substation	50	2024	AC
ARD	Ardchonnel Wind Farm	Crossaig 132kV	40.7	2021	AC
GLU	Glen Ullinish Wind Farm	Glen Ullinish 132/33kV Substation	42	2021	CA
CGP	Coire Glas Pumped Storage	Coire Glas	612	2022	AC
ELC	Elchies Wind Farm	Elchies 132/33kV Substation	99	2023	S
CD2	Clashindarroch 2	Cairnford	54	2023	S
HYW	Hywind Wind Farm	Peterhead	30	2023	AC
		Total MW	**7676**		
IC1	Norway Interconnector	Peterhead 400KV	1400	2021	S
		Total MW	**1400**		

5
Connection locations

Southern Scotland projects map

Southern Scotland also has a significant amount of new, mainly renewable, generation. The majority of projects do not have the required consents and there is a great deal of reinforcement work required.



Southern Scotland projects data

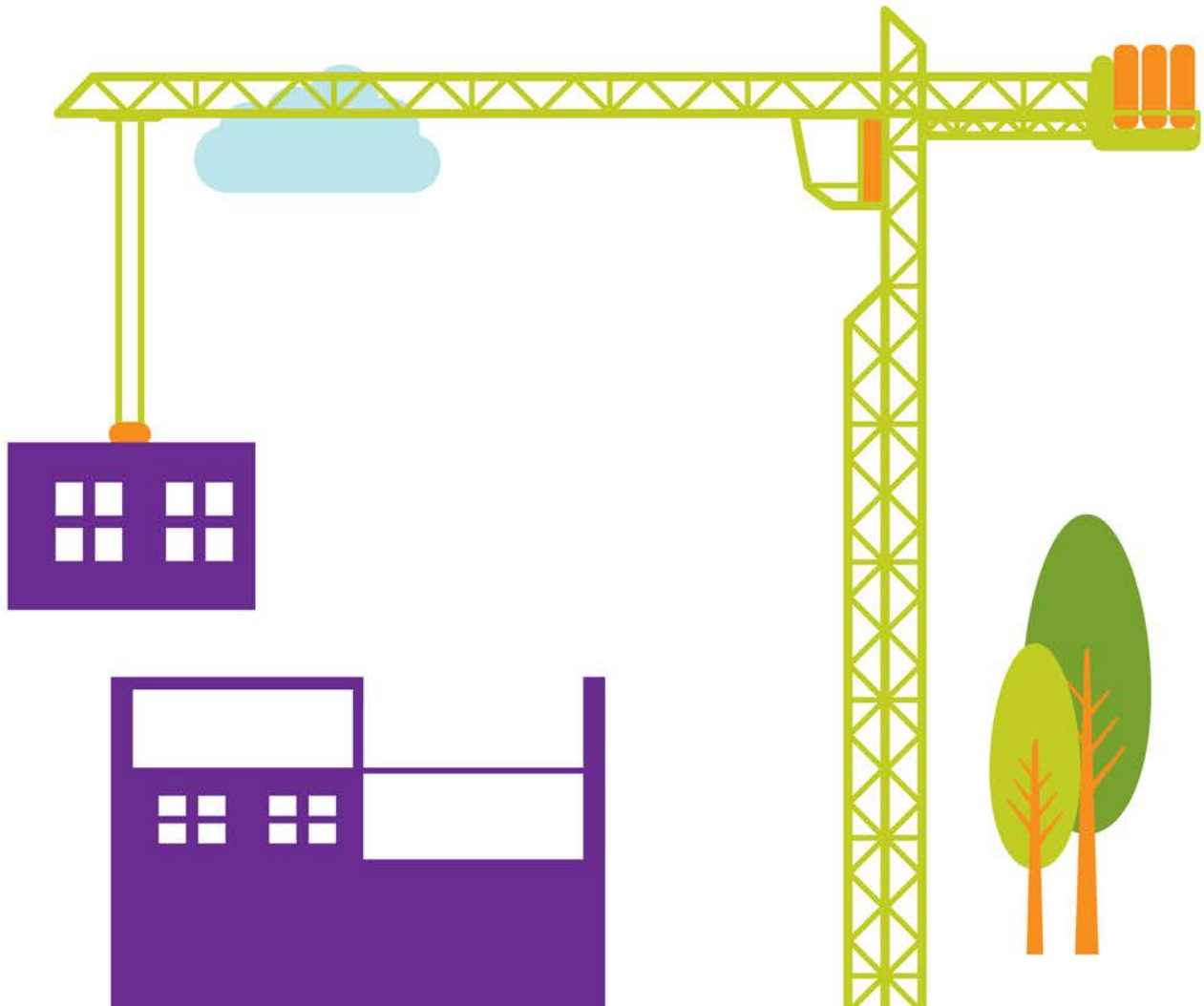
	Station Name	Connection Point	MW Increase	Connection Year	Status
ASH	Andershaw Wind Farm	Linnmill 132/33kV	35	2015	UC
BLE	Blacklaw Extension	Blacklaw Extension	69	2015	CA
CLN	Clyde North	Clyde North 275/33kV	153.5	2015	CA
POG	Pogbie Wind Farm	Pogbie 33kV Substation	11.8	2015	CA
AIK	Aikengall II Windfarm	Westerdod 132kV	140	2016	CA
AIR	Airies Wind Farm	Newton Stewart 132/33kV	35	2016	CA
ASV	Assel Valley Wind Farm	Maybole 132/33KV	29.95	2016	CA
ACR	Auchrobert Wind Farm	Linmill 132/33kV	36	2016	CA
CR2	Crystal Rig 2	Crystal Rig	62	2016	UC
DER	Dersalloch Wind Farm	Dersalloch	69	2016	CA
EWH	Ewe Hill	Ewe Hill	39	2016	CA
GWH	Galawhistle Wind Farm	Galawhistle 132/33kV	55.2	2016	CA
GAP	Glen App Windfarm	Glen App and Loch Ree 132/33kV Substation	32.2	2016	CA
GCB	Glenchamber Wind Farm	Glenluce	25.3	2016	CA
	Glenchamber Wind Farm	Glenluce	4.6	2022	CA
HBH	Harburnhead Wind Farm	Livingston East	51.7	2016	CA
HHE	Harehill Wind Farm Extension	Coylton	29.75	2016	CA
HSE	Harestanes Extension	Harestanes	17.3	2016	UC
KEH	Keith Hill Wind Farm	Keithshill 33kv	4	2016	CA
KIG	Kilgallioch	Kilgallioch 132/33kV Substation	274	2016	CA
PEN	Penmanshiel	Berwick 33kV	28.7	2016	CA
QIX	Quixwood Wind Farm	Berwick 33KV	32.5	2016	CA
SOB	Solway Bank	Chapelcross 132/33Kv Substation	37.3	2016	CA
TSH	Twentyshilling Wind Farm	Dumfries	18	2016	CA
WS2	Windy Standard II (Brockloch Rig 1) Wind Farm	Dun Hill 132/33kV	75	2016	CA
WS3	Windy Standard III Wind Farm	Dun Hill	43.5	2018	AC
AFT	Afton	Afton	68	2017	CA
ABL	Annabagliesh	Glenluce 132/33kV	34.5	2017	S
BLC	Blackcraig Wind Farm	Black Craig	57.5	2017	CA
ESH	Earlshaugh Wind Farm	Earlshaugh 132/33kV Substation	55	2017	AC
LDH	Leadhills Wind Farm	Leadhills 132/33kV	50	2017	AC
MAG	Margree	Margree 132/33kV Substation	42.5	2017	AC
MIN	Minnygap	Moffat132/33Kv	25	2017	CA
PCL	Pencloe Windfarm	Pencloe 132/33kV	63	2017	AC
PCL	Pencloe Windfarm	Pencloe 132/33kV	33	2022	AC
SHN	Shennanton Wind Farm	Newton Stewart	20	2017	S
ULZ	Ulzieside	Ulzieside 132/33kV	30	2017	AC
WSH	Whiteside Hill Wind Farm	Coylton	27	2017	CA
BQH	Benbrack & Quantans Hill	Kendoon North 132/33kV	72	2018	AC
CDY	Crossdykes	Ewe Hill	46	2018	S
INC	Inch Cape Offshore Wind Farm Platform 1	Cockenzie 275kV	130	2018	CA
	Inch Cape Offshore Wind Farm Platform 1	Cockenzie 275kV	200	2018	CA
	Inch Cape Offshore Wind Farm Platform 2	Cockenzie 275kV	270	2019	CA
KIH	Kiers Hill	Coylton 132/33Kv	57.6	2018	S
KYP	Kype Muir	Coalburn 132/33kV	99.9	2018	CA
MMU	Middle Muir Wind Farm	Middle Muir 132/33kV	51	2018	CA
NNG	Neart Na Gaoithe Offshore Wind Farm		450	2018	CA
SOK	South Kyle	New Cummock 132/33kV	165	2018	AC

Continued on next page

5
Connection locations

Southern Scotland projects data continued

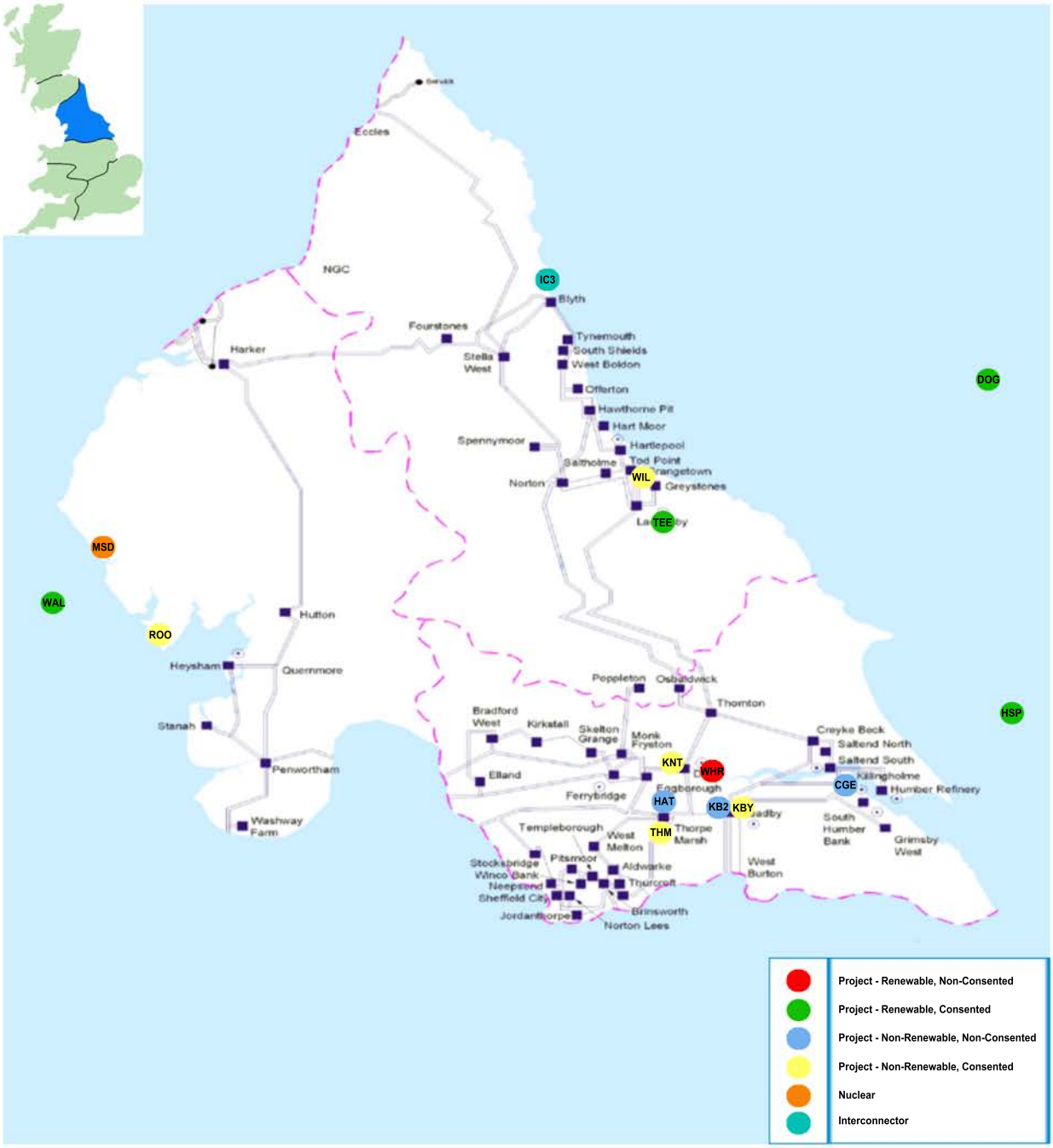
	Station Name	Connection Point	MW increase	Connection Year	Status
TRA	Tralorg Wind Farm	Tralorg 22KV	20	2018	CA
CBH	Cumberhead	Cumberhead	50	2019	S
GNM	Glenmount Wind Farm	Glenmount	73	2019	S
KXH	Kennoxhead Wind Farm	Kennoxhead	59.8	2019	AC
LOC	Loch Hill Wind Farm	Loch Hill 33kV Substation	27.5	2019	AC
	Loch Hill Wind Farm	Loch Hill 33kV Substation	5	2023	AC
LUR	Loch Urr	Loch Urr 132/33kV	84	2019	AC
WLB	Whitelaw Brae Windfarm	Whitelaw Brae	50.4	2019	S
WDE	Windy Edge Wind Farm	Windy Edge	27	2019	AC
GML	Glenmuckloch Wind Farm	Glenmuckloch 33kV	25.6	2020	AC
HRB	Harry Burn Wind Farm	Elvanfoot 275/33kV	110	2020	S
HRI	Harting Rig Wind Farm	Harting Rig 132/33kv	61.2	2020	AC
LTH	Lethans Wind Farm	Lethans 132kv Substation	88.4	2020	AC
SAK	Sandy Knowe Wind Farm	Glenglass 132/33kv	90	2020	S
BKN	Birneyknowe Wind Farm	Gretna	60	2021	AC
DGW	Douglas West	Coalburn132/33kV	45	2021	CA
FOF	Firth of Forth Offshore Wind Farm 2A East & 2A West		605	2021	S
	Firth of Forth Offshore Wind Farm 2B East & 2B West		610	2021	S
	Firth of Forth Offshore Wind Farm 2C East & 2C West		610	2021	S
	Firth of Forth Offshore Wind Farm 3A East		565	2023	S
	Firth of Forth Offshore Wind Farm 3B West		225	2023	S
LGB	Long Burn Wind Farm		60	2022	S
LOR	Lorg Wind Farm	Lorg Wind Farm 132/32kV	66	2022	S
SQH	Sanquhar Wind Farm	Sanquhar 132/33kV	99	2022	S
STN	Stranoch Wind Farm	Stranoch Wind 132/33KV	72	2022	S
GAS	Gass Wind Farm	Newton Stewart	20.7	2023	S
		Total MW	**7266**		
IC2	Auchencrosh (interconnector CCT)	Auchencrosh 275KV	-215	2017	B
		Total MW	**-215**		



5
Connection locations

Northern England projects map

Far fewer individual projects are contracted in this area compared to Scotland. However, this area contains significant Round 3 offshore wind projects. It is also worth noting the greater mix of renewable and non-renewable projects within this area.



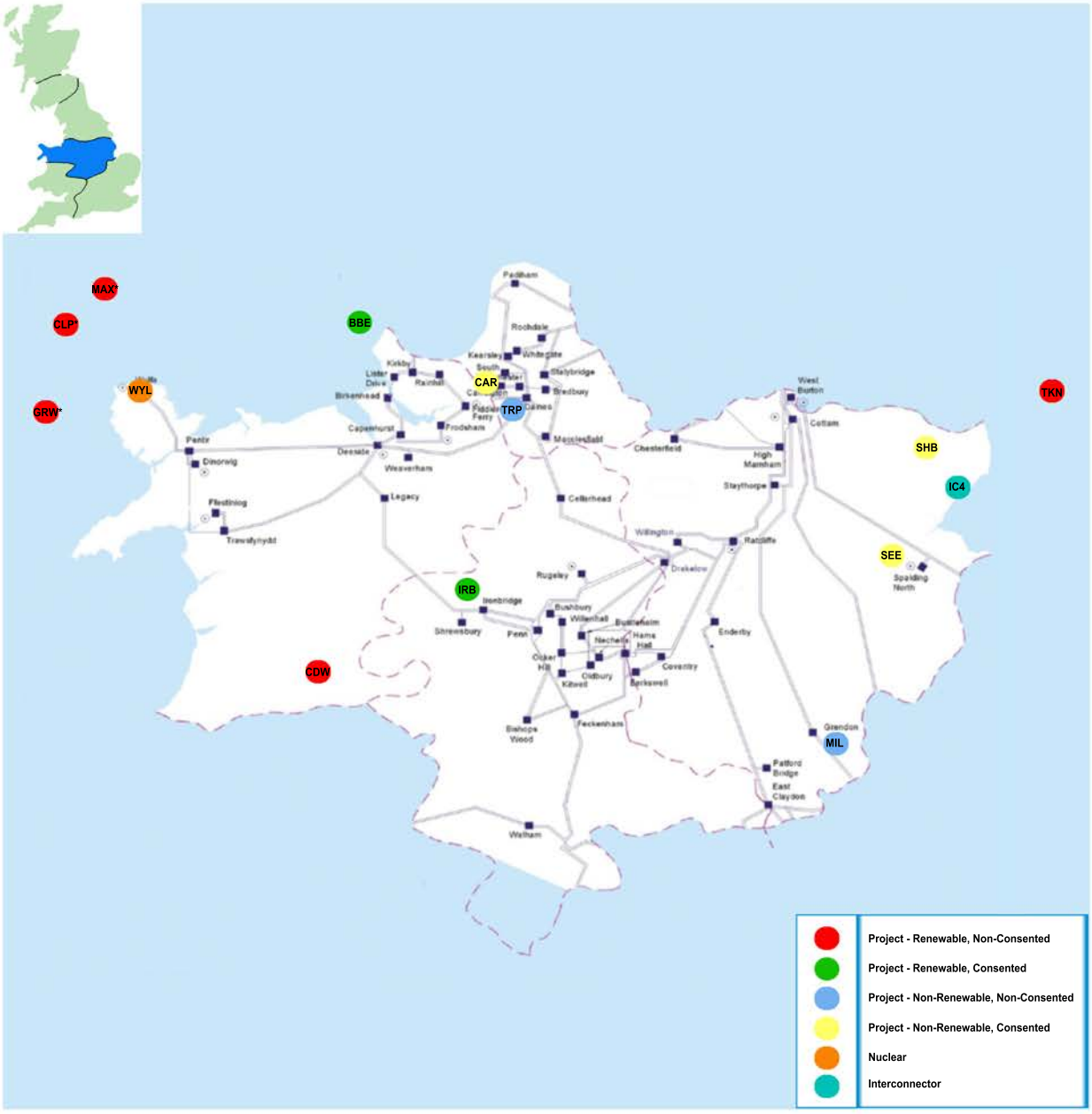
Northern England projects data

	Station Name	Connection Point	MW increase	Connection Year	Status
KB2	Keadby II	Keadby	710	2016	AC
ROO	Roosecote	Hutton 132kV Substation	-99	2016	B
TEE	Tees Renewable Energy Plant	Teesside Power Station	280	2016	CA
WIL	Wilton	Wilton 66kV	42	2016	UC
KBY	Keadby	Keadby	735	2017	UC
WAL	Walney 3 Offshore Wind Farm		330	2017	CA
	Walney 4 Offshore Wind Farm		330	2018	CA
CGE	C.Gen Killingholme North Power Station	C.Gen North Killingholme	490	2018	S
DOG	Dogger Bank Platform 1	Dogger Bank 220/33kV Offshore Substations	500	2019	CA
	Dogger Bank Platform 1	Dogger Bank 220/33kV Offshore Substations	500	2020	CA
	Dogger Bank Platform 2	Dogger Bank 220/33kV Offshore Substations	500	2019	AC
	Dogger Bank Platform 2	Dogger Bank 220/33kV Offshore Substations	500	2020	AC
	Dogger Bank Platform 3	Dogger Bank 220/33kV Offshore Substations	500	2020	AC
	Dogger Bank Platform 3	Dogger Bank 220/33kV Offshore Substations	500	2021	AC
	Dogger Bank Platform 4	Dogger Bank 220/33kV Offshore Substations	500	2019	CA
	Dogger Bank Platform 4	Dogger Bank 220/33kV Offshore Substations	500	2020	CA
	Dogger Bank Platform 5	Dogger Bank 220/33kV Offshore Substations	500	2022	S
	Dogger Bank Platform 5	Dogger Bank 220/33kV Offshore Substations	500	2023	S
	Dogger Bank Platform 6	Dogger Bank 220/33kV Offshore Substations	500	2022	S
	Dogger Bank Platform 6	Dogger Bank 220/33kV Offshore Substations	500	2023	S
HAT	Hatfield Power Station	Thorpe Marsh 400kV Substation	800	2019	CA
HSP	Hornsea Power Station 1A	Hornsea Platform 1A Offshore Substation	396	2019	CA
	Hornsea Power Station 1B	Hornsea Platform 1B Offshore Substation	402	2020	CA
	Hornsea Power Station 1C	Hornsea Platform 1C Offshore Substation	402	2020	CA
	Hornsea Power Station 2A	Hornsea Platform 2A Offshore Substation	500	2019	AC
	Hornsea Power Station 2B	Hornsea Platform 2B Offshore Substation	500	2020	AC
	Hornsea Power Station 3A	Hornsea Platform 3A Offshore Substation	500	2020	S
	Hornsea Power Station 3B	Hornsea Platform 3B Offshore Substation	500	2021	S
	Hornsea Power Station 4A	Hornsea Platform 4A Offshore Substation	500	2022	S
	Hornsea Power Station 4B	Hornsea Platform 4B Offshore Substation	500	2023	S
THM	Thorpe Marsh	Thorpe Marsh	640	2019	CA
	Thorpe Marsh	Thorpe Marsh	640	2020	CA
KNT	Knottingley Power Station	Knottingley	1500	2020	CA
WHR	White Rose	Drax 400kV	400	2020	S
MSD	Moorside	Moorside 400kV Substation	1129	2024	S
	Moorside	Moorside 400kV Substation	1129	2025	S
	Moorside	Moorside 400kV Substation	1129	2026	S
		Total MW	**20385**		
IC3	Norway Interconnector (NSN)	Blyth 400KV Substation	1400	2019	AC
		Total MW	**1400**		

5
Connection locations

Central England and North Wales projects map

Central England and North Wales has a contracted background of non-renewable power stations and offshore wind from both the Irish Sea and North Sea, for which significant network reinforcements are required. In addition, onshore wind from mid Wales will require new connections into the network.



* Projects connecting to North Wales from Ireland

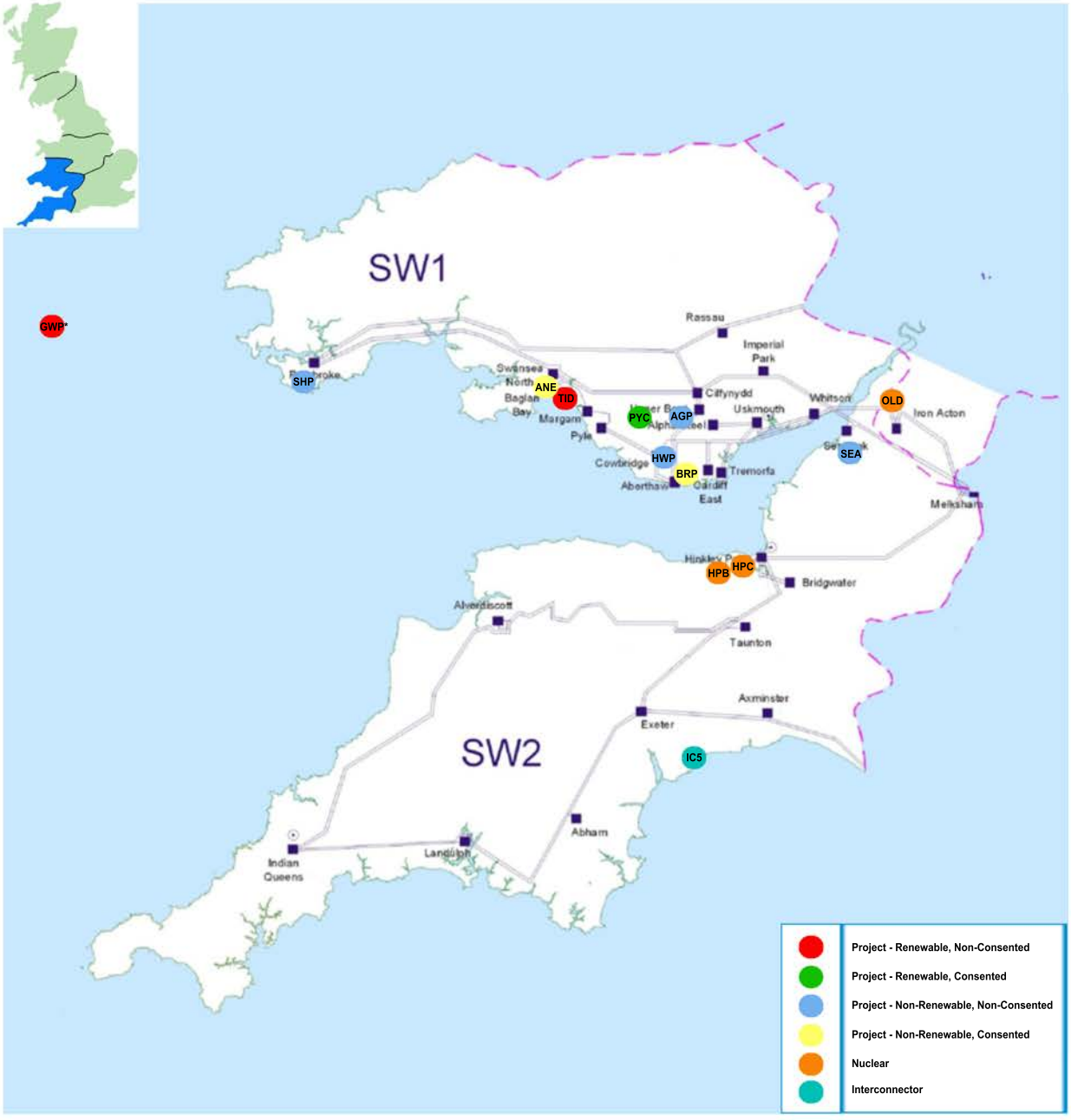
Central England and North Wales projects data

	Station Name	Connection Point	MW increase	Connection Year	Status
CAR	Carrington Power Station	Carrington	910	2015	UC
BBE	Burbo Bank Extension Offshore Wind Farm	NGET Bodelwyddan 400kV Substation	254	2016	UC
IRB	Ironbridge	Ironbridge	-385	2016	B
SHB	South Humber Bank	South Humber Bank	825	2017	B
MAX	Marex	Connahs Quay 400kV	1500	2018	S
SEE	Spalding Energy Expansion	Spalding	625	2018	CA
TRP	Trafford Power - Stage 1	Carrington 400kV	1882	2018	AC
	Trafford Power - Stage 2	Carrington 400kV	2162	2025	AC
CDW	Carnedd Wen Wind Farm	Mid-Wales West	150	2019	S
TKN	Triton Knoll Offshore Wind Farm		360	2019	S
	Triton Knoll Offshore Wind Farm		540	2020	S
GRW	Greenwire Wind Farm - Pentir	Pentir 400kV Substation	1000	2020	S
MIL	Millbrook Power	Millbrook 400kV	299	2020	S
CLP	Codling Park Wind Farm	Pentir Substation	1000	2021	S
WYL	Wylfa Newydd	Wylfa 400kV Substation	1400	2024	S
	Wylfa Newydd	Wylfa 400kV Substation	1400	2025	S
		Total MW	**13922**		
IC4	Viking Link Denmark Interconnector	Bicker Fenn 400KV Substation	1000	2020	S
		Total MW	**1000**		

5
Connection locations

South West England and South Wales projects map

The South West has a number of non-renewable projects including nuclear sites. Also contracted to connect towards the end of the decade is a significant amount of offshore and onshore wind from the Irish Sea and Irish mainland.



* Projects connecting from Ireland

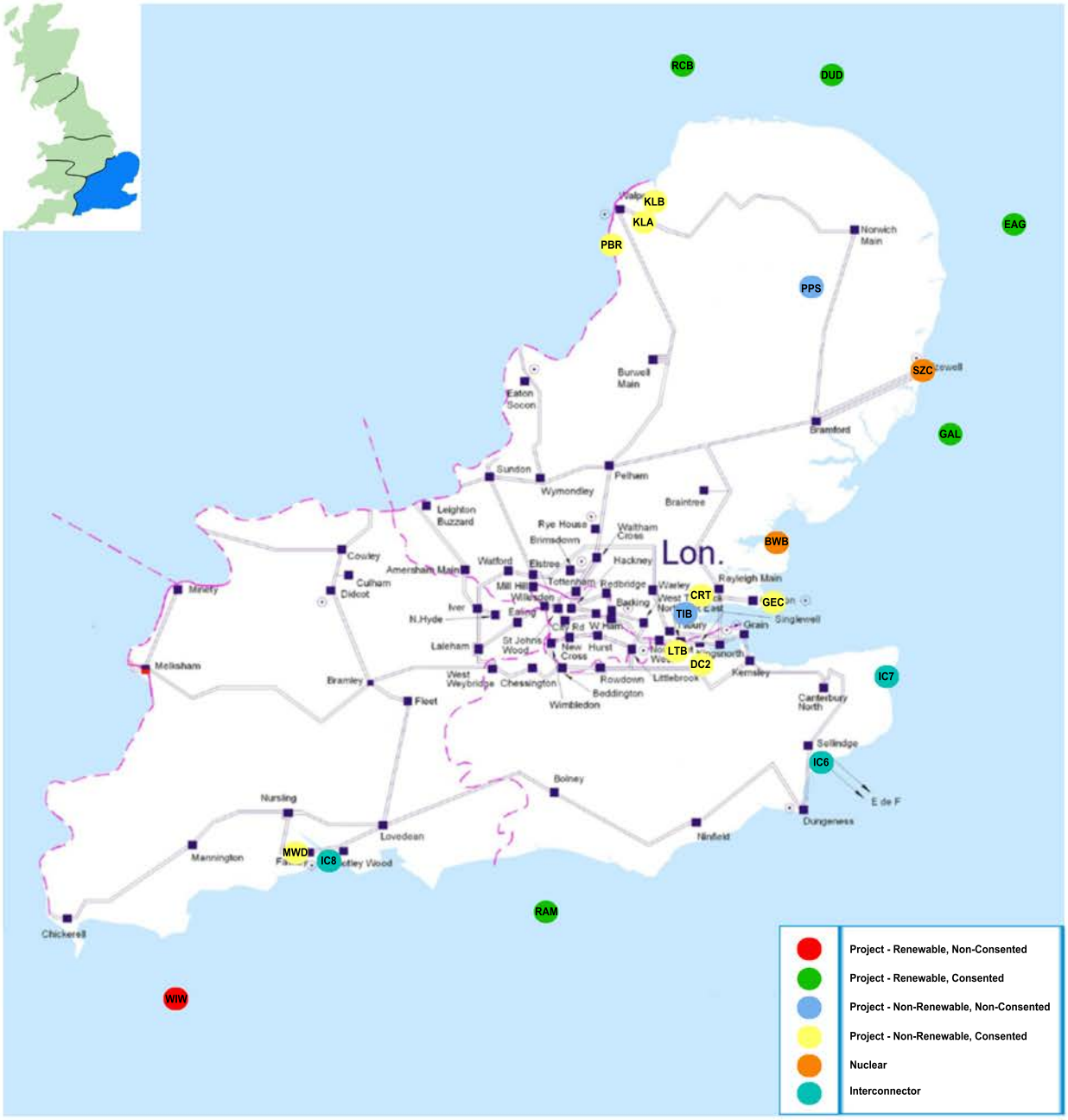
South West England and South Wales projects data

	Station Name	Connection Point	MW increase	Connection Year	Status
BRP	Barry Power Station	Aberthaw 132kV substation	-136	2016	B
PYC	Pen Y Cymoedd Wind Farm	Rhigos 400kV	228	2016	UC
SHP	South Hook CHP Plant	Pembroke 400kV Substation	490	2016	S
ANE	Abernedd Power Station	Baglan Bay 275kV	500	2017	CA
	Abernedd Power Station	Baglan Bay 275kV	414	2018	CA
HPB	Hinkley Point B	Hinkley Point 275kV Substation	-200	2017	B
HPC	Hinkley Point C	Hinkley 400kV Substation	1670	2022	CA
	Hinkley Point C	Hinkley 400kV Substation	1670	2023	CA
TID	Tidal Lagoon	Baglan Bay	320	2018	S
HWP	Hirwaun Power Station	Rhigos	299	2019	AC
AGP	Abergelli Power	Swansea North 400kV	299	2020	S
GWP	Greenwire Wind Farm - Pembroke	Pembroke 400kV Substation	2000	2020	S
OLD	Oldbury-on-Severn	Oldbury-on-Severn 400kV Substation	1600	2020	S
	Oldbury C	Oldbury-on-Severn 400kV Substation	1600	2023	S
SEAL	Seabank 3	Seabank 400kV Substation	1200	2021	S
		Total MW	**11954**		
IC5	FAB Link Interconnector	Exeter 400KV Substation	1400	2020	AC
		Total MW	**1400**		

5
Connection locations

South East England projects map

Much of the new generation in this area is non-renewable. However, there are several renewable projects around the coast of Norfolk in the form of offshore wind farms. Most of the reinforcement work in this area is concentrated around the Thames estuary and the new nuclear site at Sizewell.



South East England projects map

	Station Name	Connection Point	MW increase	Connection Year	Status
MWD	Marchwood	Marchwood 400kV Substation	20	2015	UC
DC2	Damhead Creek II	Damhead Creek 400kV	1200	2016	CA
DUD	Dudgeon Offshore Wind Farm	Necton 400kV Substation	400	2016	UC
KLA	Kings Lynn A	Walpole 132KV Substation	266	2016	B
LTB	Littlebrook	Littlebrook 400kV Substation	-800	2016	B
PBR	Peterborough	Walpole 132KV Substation	-146	2016	B
RAM	Rampion Offshore Wind Farm	Rampion 33/132kV Offshore Substation	332	2016	UC
	Rampion Offshore Wind Farm	Rampion 33/132kV Offshore Substation	332	2017	CA
GAL	Galloper Wind Farm	Galloper North 132/33kv	70	2017	CA
	Galloper Wind Farm	Galloper North 132/33kv	114	2017	CA
	Galloper Wind Farm	Galloper North 132/33kv	156	2017	CA
RCB	Race Bank Wind Farm	Race Bank 132/33kV Substation	160	2017	CA
	Race Bank Wind Farm	Race Bank 132/33kV Substation	405	2017	CA
CRT	Coryton	Coryton	-96	2018	B
EAG	East Anglia 1	Platform EA1A and Platform EA1B 220/33kV Substations	600	2018	CA
	East Anglia 1	Platform EA1A and Platform EA1B 220/33kV Substations	600	2018	CA
	East Anglia 2	Platform EA2A and Platform EA2B 220/33kV Substations	400	2023	S
	East Anglia 2	Platform EA2A and Platform EA2B 220/33kV Substations	400	2023	S
	East Anglia 3	Platform EA3A and Platform EA3B 220/33kV Substations	600	2021	S
	East Anglia 3	Platform EA3A and Platform EA3B 220/33kV Substations	600	2021	S
	East Anglia 4	Platform EA4A and Platform EA4B 220/33kV Substations	600	2022	S
	East Anglia 4	Platform EA4A and Platform EA4B 220/33kV Substations	600	2022	S
	East Anglia 5	Platform EA5A and Platform EA5B 220/33kV Substations	500	2024	S
	East Anglia 5	Platform EA5A and Platform EA5B 220/33kV Substations	500	2024	S
	East Anglia 6	Platform EA6A and Platform EA6B and Platform EA6C 220/33kV Substations	600	2025	S
	East Anglia 6	Platform EA6A and Platform EA6B and Platform EA6C 220/33kV Substations	600	2025	S
	East Anglia 6	Platform EA6A and Platform EA6B and Platform EA6C 220/33kV Substations	600	2026	S
GEC	Gateway Energy Centre Power Station	Coryton South 400kV Substation	1096	2018	CA
WIW	West Isle of Wight Power Station 1	West of Isle of Wight 220/33kV Substation	368	2018	AC
	West Isle of Wight Power Station 2	West Isle of Wight 220/33kV Substation	368	2020	AC
	West Isle of Wight Power Station 3		368	2021	AC
PPS	Progress Power Station	Eye 400kV Substation	299	2019	AC
TIB	Tilbury C	Tilbury 400kV Substation	1800	2019	AC
KLB	Kings Lynn B	Kings Lynn B 400kV Substation	981	2020	CA
SZC	Sizewell C	Sizewell North 400kV Substation	1670	2020	S
	Sizewell C	Sizewell North 400kV Substation	1670	2021	S
BWB	Bradwell B	Bradwell 400kV Substation	1670	2021	S
		Total MW	**19903**		
IC6	ElecLink	Sellindge 400KV Substation	1000	2016	AC
IC7	Belgium Interconnector (Nemo)	Ricborough 400KV Substation	1000	2018	AC
IC8	IFA2 Interconnector	Chilling 400KV Substation	1000	2019	S
		Total MW	**3000**		

6
Current connected generation

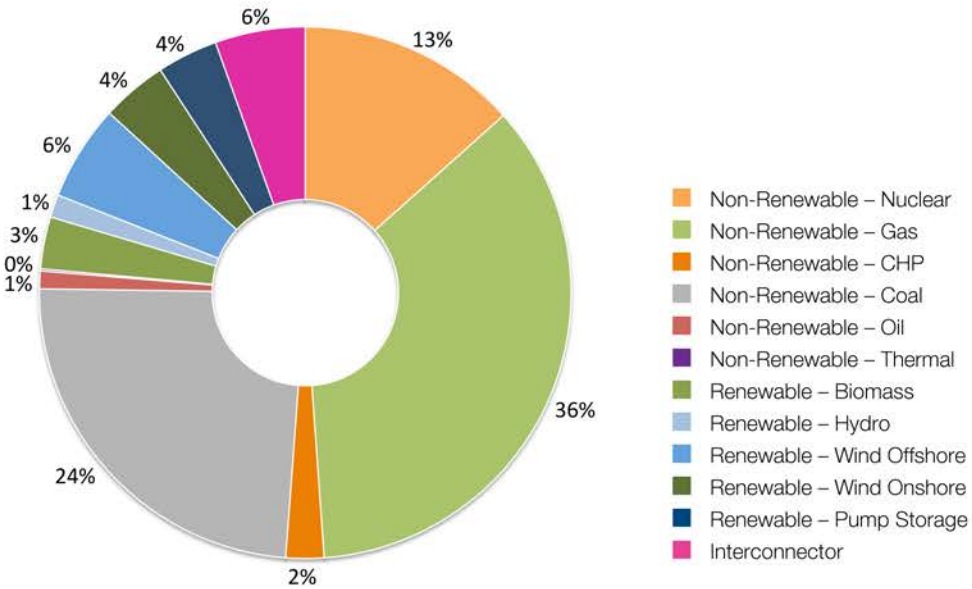
The data in the table below shows a summary by fuel type of the amount of generation already connected to the NETS.

Large CCGT plants make up a large proportion of non-renewable generation. Onshore and offshore wind is the main contributor towards current renewable generation with a continuing increase in connections allowing the total renewable capacity to increase to just over 19%

Sum of MW connected generation

	Plant Type	MW
Non-Renewable	Nuclear	9937
	Gas	26343
	CHP	1717
	Coal	17857
	Oil	800
	Thermal	94
Non-Renewable Total		**56748**
Renewable	Biomass	2345
	Hydro	1031
	Wind Offshore	4328
	Wind Onshore	2975
	Pump Storage	2744
Renewable Total		**13424**
Interconnector		**4074**
Total		**74245**

The chart below shows the breakdown of current generation already connected by fuel type



The table below shows generation that has connected to the NETS in the last 6 months

Company	Project Name	Fuel Type	MW (TEC)	Connection Date
SSE Generation Ltd	Strathy North and South Wind	Wind Onshore	67.75	26-Jun-2015
	Total MW		**67.75**	

The table below shows existing generation that formally requested to change its contracted TEC (MW) up to and including 1 August 2015

Company	Project Name	Fuel Type	MW Connected	MW Change	MW Total	Effective Date

There were no requests for changes between the period of 1st April to 1st August

The table below shows existing generation that has formally requested to change its contracted TEC (MW) position from 1 August 2015

Company	Project Name	Fuel Type	MW Connected	MW Change	MW Total	Effective Date
Marchwood Power Ltd	Marchwood	CCGT	900	20	920	01-Oct-2015
Clyde Wind Farm (Scotland) Ltd	Clyde North	Wind Onshore	221	154	375	31-Oct-2015
Centrica Barry Ltd	Barry Power Station	CCGT	235	-136	99	01-Apr-2016
EDF Energy Nuclear Generation Ltd	Hinkley Point B	Nuclear	1,261	-200	1,061	01-Apr-2016
E.ON UK plc	Ironbridge	Biomass	385	-385	0	01-Apr-2016
Centrica RPS Ltd	Roosecote	CCGT	99	-99	0	01-Apr-2016
Crystal Rig II Ltd	Crystal Rig 2	Wind Onshore	138	62	200	01-Apr-2016
Sembcorp Utilities (UK) Ltd	Wilton	CCGT	99	42	141	01-Apr-2016
Centrica PB Ltd	Peterborough	CCGT	245	-146	99	01-Apr-2016
Centrica KL Ltd	Kings Lynn A	CCGT	99	266	365	01-Apr-2016
RWE Generation UK Plc	Littlebrook	Oil & AGT	800	-800	0	01-Apr-2016
SSE Generation Ltd	Strathy North and South Wind	Wind Onshore	67.75	132.6	200	31-Oct-2016
Humber Power Ltd	South Humber Bank	CCGT	540	825	1,365	01-Apr-2017
Moyle Interconnector Limited	Auchencrosh (interconnector CCT)	Interconnector	295	-215	80	10-Nov-2017
Coryton Energy Company Ltd	Coryton	CCGT	800	-96	704	01-Oct-2018
	Total MW			**-576**		

7
Embedded generation

The information contained within this section has been taken from the Embedded Generation Register.

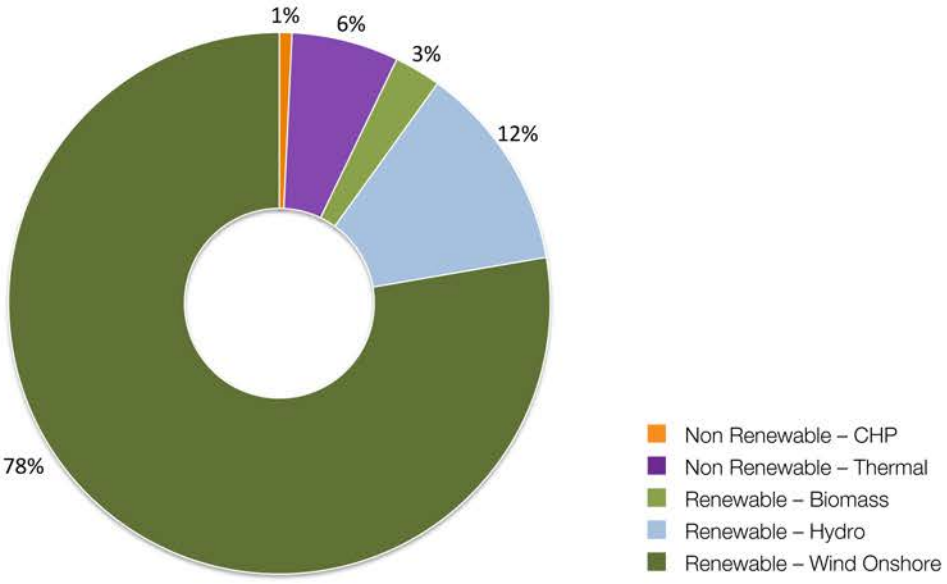
This register contains projects that National Grid Electricity Transmission plc has been made aware of through either: a Connection Application, or the Statement of Works process. As a result of their connection into a Distribution Network they have been deemed to also have an impact on the NETS.

You can access the register via the following link: http://www2.nationalgrid.com/UK/Services/Electricity-connections/Industry-products/Embedded-Generation-Register/

The data in the table below shows a summary by fuel type of the amount of embedded generation already connected to a Distribution Network.

Sum of MW connected embedded generation

	Plant Type	MW
Non-Renewable	CHP	12
	Thermal	103
Non-Renewable Total		**115**
Renewable	Biomass	45
	Hydro	199
	Wind Onshore	1253
Renewable Total		**1497**
Total		**1612**



Contracted future renewable and non-renewable embedded generation to 2022

	Capacity (MW)	Fuel Type	MW
Non-Renewable	10	CHP	10
Renewable	1077	Biomass	11
		Tidal	53
		Wave	3
		Wind Offshore	10
		Wind Onshore	820
		Hydro	90
		PV Array	90
Total	**1087**		**1087**

8
Useful information

Acronyms

This table defines the acronyms used throughout this report and other National Grid publications. Where applicable a link is provided to more information.

Acronym	Definition	More Information
CCGT	Combined Cycle Gas Turbine	
CCS	Carbon Capture Storage	
CHP	Combined Heat and Power	
CUSC	Connection Use of System Code	
DECC	Department of Energy and Climate Change	
GW	Gigawatt	1 GW = 1000 Megawatts
kV.	Kilovolt	1 kV. = 1000 volts
MW	Megawatt	1 MW = 1000 Kilowatts
NETS	National Electricity Transmission System	
OFGEM	Office of Gas and Electricity Markets	
TEC	Transmission Entry Capacity	

Useful information links:

For electricity transmission connections (including applications, customer seminars and the compliance process)
http://www2.nationalgrid.com/UK/Services/Electricity-connections/

For TEC Register, Interconnector Register and Embedded Generation Register
http://www2.nationalgrid.com/UK/Services/Electricity-connections/Industry-products/

For the Electricity Ten Year Statement and System Operability Framework
http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/

For Future Energy Scenarios
http://www2.nationalgrid.com/UK/Industry-information/Future-of-Energy/Future-Energy-Scenarios/

For electricity codes, standards and related documents (including the CUSC and Grid Code)
http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/

For electricity transmission charges
http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission-Charges/

For European energy topics
http://www2.nationalgrid.com/UK/Industry-information/Europe/

For DECC
https://www.gov.uk/government/organisations/department-of-energy-climate-change

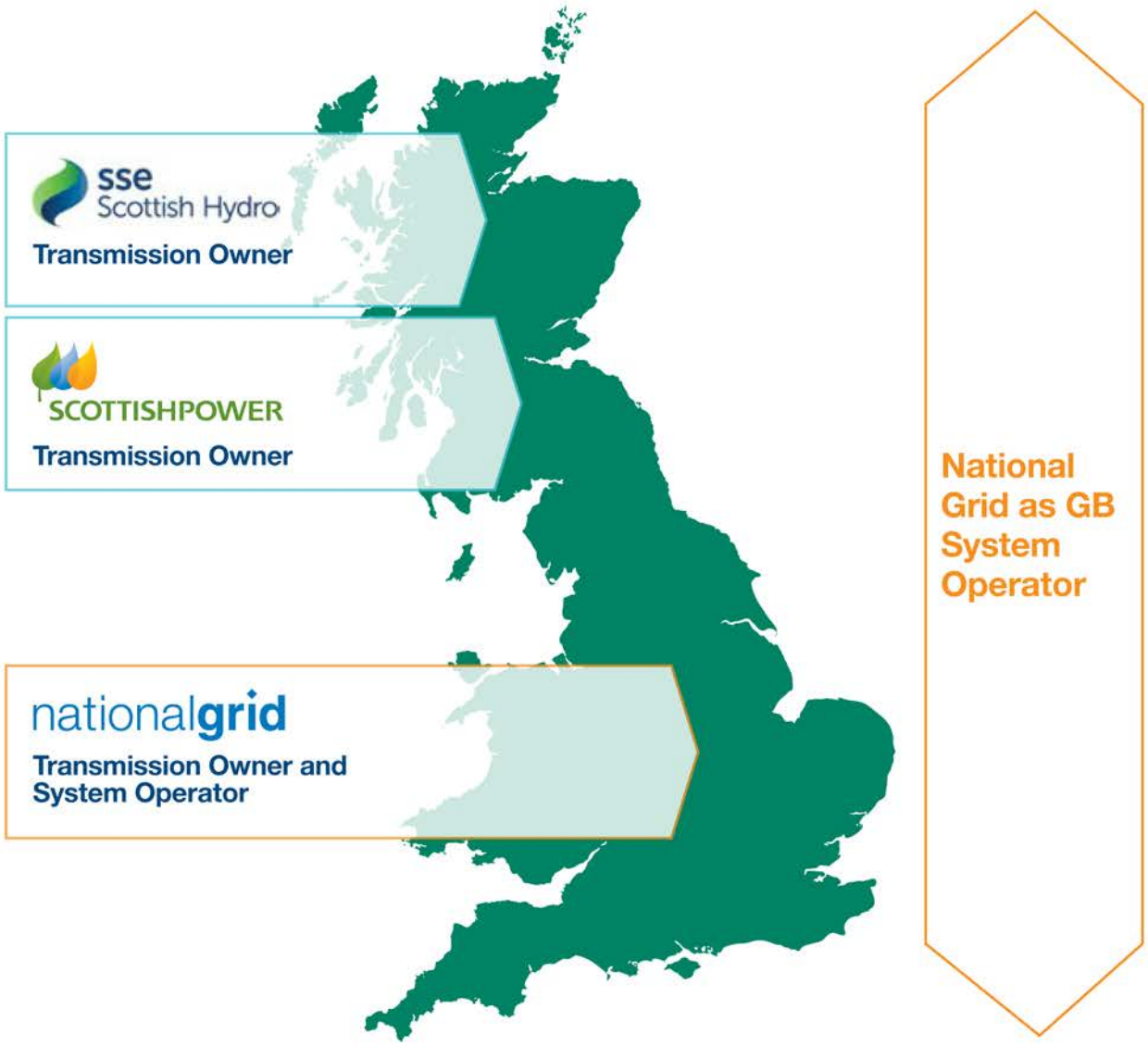
For Ofgem
https://www.ofgem.gov.uk/

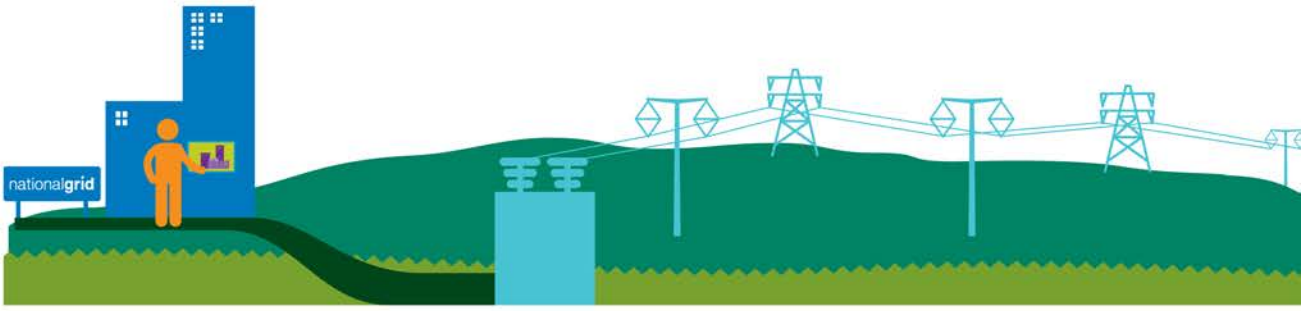
For National Grid Electricity Transmission plc
http://www2.nationalgrid.com/

For Scottish Hydro Electric Transmission plc
http://sse.com/whatwedo/networks/electricitytransmission/

For Scottish Power Transmission Ltd
http://www.spenergynetworks.co.uk/pages/home.asp

The GB Electricity Transmission System





For further guidance about connection to the National Grid Transmission System please contact us, or visit our website.

If you have a general query or are unsure who to contact, you can email us at transmissionconnections @nationalgrid.com

You can also call our customer service team on +44 (0)1926 654634 between 8am – 5pm, Monday to Friday.

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