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ANALYSIS OF THE UK DISTRIBUTION GRID CAPACITY AND GENERATION MARKET

Accepted Offers, Technology, Top Player Site Information, etc.

2022

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Chapter 1. Executive Summary

The UK Government has set out ambitious targets for clean energy deployment to enable the shift from fossil fuels to renewables following the rising global energy prices, the volatility in international markets and the pressure from global climate change. We can expect a future where most of the electricity is from climate-friendly energy sources in the UK. The electricity infrastructure in the UK is in urgent need of upgrade to accommodate this radical energy revolution. It requires reinforcement work to energise the overstocked accepted capacity and relies on ongoing plans to convert the energy transport from the traditional centralised model to a new decentralised model to mitigate the curtailment of renewable generations.

This report will present statistical analysis for the UK distribution network capacity and generation from various perspectives, thus to provide useful reference information to distribution network operators (DNOs), developers and investors for a better understanding of the industrial status as of today and its foreseeable trend. Our analysis of the DNO grids mainly focuses on the points:

- the comparison between accepted capacity and connected capacity;
- the current and predicted trend of the accepted capacity and connected capacity;
- the accepted and connected offers across recent years, technologies, PoC voltages and top players from DNO grid level, individual DNO level and individual licence area level;
- the trend of accepted and connected capacity of different technologies from DNO grid level, individual DNO level and individual licence area level;
- the PoC voltage statistics of accepted and connected capacity of different technologies from DNO grid level, individual DNO level and individual licence area level;
- the trend of accepted and connected capacity with different PoC voltage levels from DNO grid level, individual DNO level and individual licence area level;
- The accepted/ connected site information of top players by technology and by year at DNO grid level, individual DNO level and individual licence area level.

Chapter 2 reviews the background of the arriving renewable energy revolution, the long-term pressure of mitigating curtailment and short-term pressure to integrate the overstocked accepted capacity. We also illustrate the data source and data cleansing process utilised in this report.

Chapter 3 defines the C/A Ratio to compare the connected capacity with the accepted capacity over a given period. The C/A Ratio helps developers gauge the probability to be connected for an accepted offer without delay. The Overdue Ratio

is also defined to review the accepted offers before 2019 but have not been connected yet. A detailed trend analysis and forecast is also shown in this chapter by comparing the trend of accepted capacity and connected capacity from different DNOs, technologies and across different timescales.

We present detailed analysis of accepted offers at distribution grid level (Chapter 4) and individual DNO level (Chapter 6) from various perspectives including timeline, technology, PoC voltage and top players. The statistical analysis of connected offers following the same structure is performed at DNO grid level in Chapter 5 and at individual DNO level in Chapter 7.

Chapter 8 concludes the analysis in this report and sends informative message to DNOs, developers and investors.

The Appendix of this report collects detailed site information of top players at DNO grid level, across various technologies and in different years. We also show the results of the analysis at licence area level in Appendix using charts and tables without verbose explanations.

Chapter 2. Background

The Picture of the Radical Energy Revolution

Energy is the lifeblood of the whole society and a reliable, affordable and efficient energy system is the heart to drive the energy flow through every corner of our life, from lighting our cities to heating our homes.

The surge demand of energy after the pandemic and the recent tense global politic situations keeps pushing the energy price higher and higher and unavoidably increases the cost of livings in the UK. The Government has provided financial assistance to overcome the short-term difficulties caused by higher energy bills and has set the long-term goal to address the vulnerability of the British energy system to international oil and gas prices. The transformation of energy generation from oil and gas to renewable sources is the key to achieve the energy security target. The imperative to limit climate change and achieve the Net Zero emissions targets in 2050 have also strengthened the momentum of the transition from traditional energy sources to renewables. To drive the success of this energy transition from oil and gas to renewable sources, the new Energy Security Strategy has set out the ambitious targets by 2030 to grow up 5 times of the UK's current solar capacity to 70GW, offshore wind to 50GW and hydrogen to 10GW, etc. A radical energy revolution has already started in the UK.

The Long-Term Pressure on Power Networks to Welcome the Energy Revolution

On one hand, all of the strategies and ambitious targets have drawn a great picture for a radical revolution of the energy structure in the UK. On the other hand, the electricity infrastructure in the UK seems to be struggling to keep up with this rapid change.

The current network has been built to accommodate the centralised energy flow model with electricity being generated at large power stations and transported to wherever required through a well-designed route: the transmission network takes power from large centralised stations and, with high voltage levels over long distance, passes the energy flow to distribution network from where the electricity is supplied to thousands of end consumers. However, most of the renewable generations, especially solar sites and onshore wind farms, are decentralised with small capacity and directly connected into the distribution network, resulting in a new decentralised energy flow model.

The direct impact of the change from the centralised generation model to the decentralised generation model is the limitation to send power via transmission network to remote consumers. In reality, power flow can be reversed to transport

electric power from distribution network to transmission network. But the sensitivity and various parameter coordination of protections, the negative impact on transformers and the capacity limitation of power lines have strongly restricted the volume of reversed power flow. Thus, when local demands cannot digest the overwhelmed energy from their adjacent renewable sources and the energy being input to the distribution network is too much to manage, the network will become overloaded and generators will be forced to disconnect. This type of **curtailment** balancing process has resulted in a negative financial impact on the generators' business revenue, a restriction of the further deployment of renewable stations and a terrible waste of clean energy. In 2020, approximately 3.8TWh of electricity was lost due to curtailment, £826 million was spent by National Grid to balance the grid mainly to pay wind farms to cease generations. A research result from LCP shows that the curtailment cost will reach £1bn per year by 2025.

Curtailment has become a strong constraint of the development of renewable generations and a big challenge that must be tackled if the UK is to realise its energy revolution targets. Under current price control for the DNOs, RIIO-ED1, there is no direct incentive for how much distribution generation is connected in their networks. Generators have to contribute to reinforcement works, such as new physical infrastructure, to be connected to distribution networks under the current charging methodology. Such arrangement has resulted in an ineffective cost signal and became a barrier to Net Zero. At the same time, DNOs have been implementing on Active Network Management (ANM) system or Distributed Energy Resources Management Systems (DERMs) to connect generators under curtailment. This report will provide supportive information for a better understanding of this problem by focusing on the data analysis of the two important decentralised renewable sources: photovoltaic and onshore wind. We also analyse the battery storage technology which presents a fast-rising trend as a result of fulfilling the need of renewable power balancing management.

The Short-Term Pressure on Connections to Catch up with the Boosting Accepted Offers

The long-term upgrade plan from DNOs is required to adapt to the energy revolution, but a short-term reinforcement plan of the network is needed immediately to catch up with the boiling market. **Figure 2-1** shows the ratios of total accepted but not connected capacity in DNOs (excl. SSE and SPEN as explained in **Table 2-1**) over already connected capacity for different technologies by year. **Figure 2-2** presents these ratios utilising cumulative accepted and connected capacity since 2017. For simplicity, we will refer the ratios shown in **Figure 2-1** as "yearly ratios" and the ratios shown in **Figure 2-2** as "cumulative ratios".

First of all, we notice the yearly ratios and cumulative ratios were around 1.2 before 2018, meaning that the capacity accepted in 2017 and 2018 but still awaiting to be connected by now is around 1.2x of the capacity connected in these two years. This raises a question: **why there is so much capacity that was accepted 5**

years ago still cannot be connected and energised? This problem has become more serious now as we can see the yearly ratio of the total capacity in DNOs has exponentially increased and reached as high of 73.3x in 2022 meaning that for every 1MW connected capacity there is another 73.3MW wating to be connected. The delay in connecting the generators and the increasing accepted capacity may result in this multiple being even higher in the next few years. The growth of the yearly ratio has pushed up the cumulative ratio of the total capacity over the period of 2017-2022 to as high of 10.8x meaning that the capacity waiting to be connected is 10.8x of the actually connected capacity by DNOs over the period of 2017-2022. This raises another question: **how will the DNOs prepare to digest the high volume of overstocked capacity wating to be connected?**

Figure 2-1: Accepted but not connected capacity/ connected capacity by year (excl. SSE and SPEN)

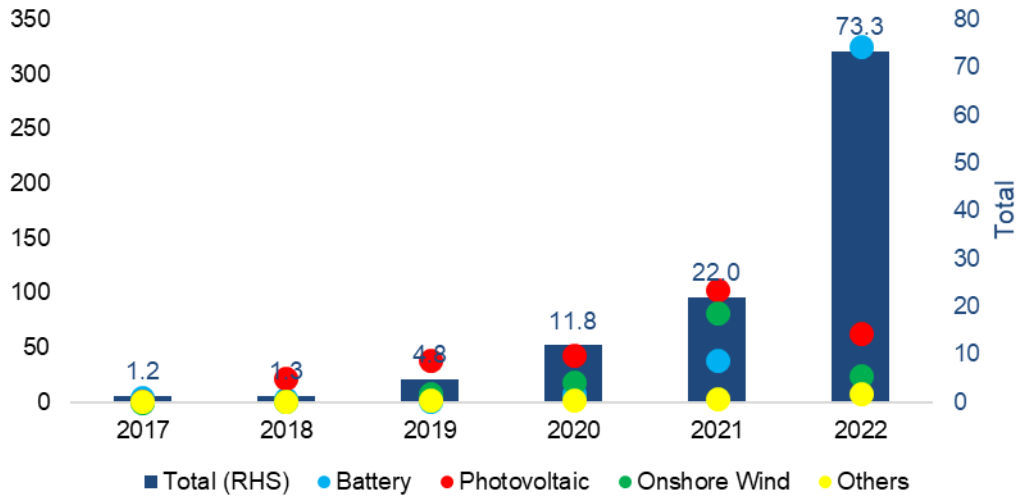
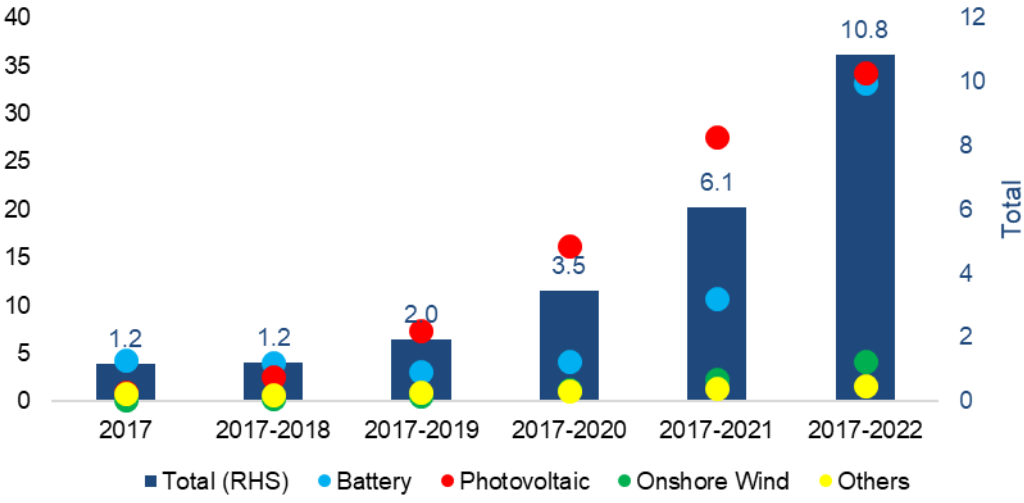


Figure 2-2: Cumulative accepted but not connected capacity/ cumulative connected capacity from 2018 to 2022 (excl. SSE and SPEN)



From technology perspective, the high pressure of connections mainly comes from battery storage since its yearly ratio have dramatically increased to over 300x in 2022 and in the meantime, its cumulative ratio has reached nearly 35x. Although onshore wind has a high yearly ratio over 80x in 2021, its cumulative ratio of 2018-2021 is only approximately 2.5x. The fast-rising yearly ratio did not lead to a high cumulative ratio of onshore wind. This is caused by the downtrend of connections along with an uptrend of acceptances of onshore wind capacity over the years from 2018 to 2022 . The DNOs should be easily to deal with the onshore wind connections in time if they wish to reverse the connection trend from downward to upward in the near future.

This report provides information of detailed statistical analysis and trend predictions of accepted offers and connected capacities in distribution network over technologies, PoC voltage levels and top players, helping the policy makers, investors, equipment manufacturers, developers and planning engineers better understand the industry status as of today, thus be well equipped to drive the energy evolution and realise the Net Zero goal.

Data Source and Data Cleansing

This report mainly focuses on the statistical analysis for the Embedded Capacity Register (ECR) data provided as of 5th January 2023 by the 6 Distribution Network Operators (DNOs): NGED, UKPN, SSE, SPEN, NPG and ENW. We also considered data provided by some developers as a supplementary to the ECR data.

Table 2-1: Connected and accepted capacity (total versus that without a registration date) by DNO

	Connected (MW), total	Connected (MW) with unknown date	Connected, unknown date/ total	Accepted (MW), total	Accepted (MW) with unknown date	Accepted, unknown date/ total
NGED	8,362	47	1%	35,417	0	0%
UKPN	8,296	151	2%	14,438	17	0%
SSE	5,157	3,657	71%	17,934	1,435	8%
SPEN	4,703	1,617	34%	8,409	5,784	69%
NPG	4,061	220	5%	13,189	196	1%
ENW	2,699	0	0%	4,676	0	0%

Table 2-1 shows our analysis for the proportion of data items without a registration date for acceptance or connection in the ECR data sheet by DNO. There is 71% connected capacity recorded without a connection date in SSE and 34% in SPEN. SPEN registered 69% accepted offers without an acceptance date in their ECR data sheet. Due to this data quality issue, we will exclude SSE and SPEN in the analysis related to connection date and exclude SPEN for analysis related to acceptance date in our report.

Main data cleansing methodologies utilised in this report includes:

- cleansing the customer names in the ECR data sheets by combing items such as “STOR 101 LTD” and “STOR 104 Ltd” to a group name of “STOR”;
- focusing our analysis on photovoltaic, onshore wind and battery storage and classifying the capacity of all other technologies to a common category of “others”;
- splitting the PoC voltages to 5 levels: 132kV, 66kV, 33kV, 11kV<= PoC < 33kV and PoC<11kV in our analysis.

Chapter 3. Distribution Grid Overview

In this chapter, we take an overview of the distribution grid capacity by analysing the accepted offers and connected capacity.

- We define the **C/A Ratio** (Figure 3-1) to compare the connected capacity with the accepted capacity over a given period.
- We analyse the **Overdue Ratio** (Figure 3-2), providing an overview of the capacity accepted 3 years ago but has not yet been connected.
- We present a forecast of the boosting trend of the accepted offers and a rising connected capacity in the near future by illustrating the accepted and connected capacity across DNO, technology and timeline.

The C/A Ratio: Connected versus Accepted Capacity

Figure 3-1: Connected capacity versus accepted capacity by DNO

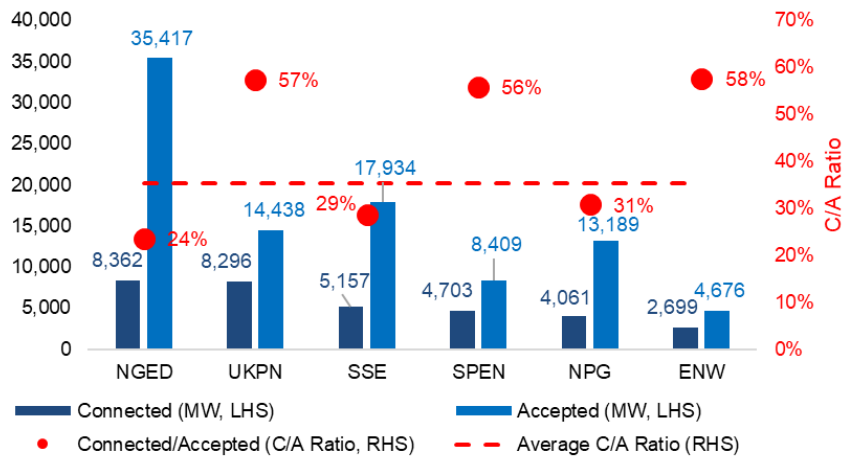


Figure 3-1 shows the connected capacity (MW) versus accepted capacity (MW) by each DNO utilising their whole historical data. NGED leads the accepted capacity with more than 30GW followed by SSE and UKPN with more than 10GW. Counting 75% of the accepted capacity, NGED, SSE and UKPN will take most of the connection work in the near future.

Distribution Network Operator (DNO)

A distribution network operator (DNO) is a licensed company that owns and operates the network of cables, transformers and towers that bring electricity from the national transmission network to most end users.

Accepted Capacity

This is the registered capacity of generation that is not already connected, but has been accepted to connect, expressed in MW.

Connected Capacity

This is the total registered capacity of generation already connected at the site expressed in MW.

We define the C/A Ratio by

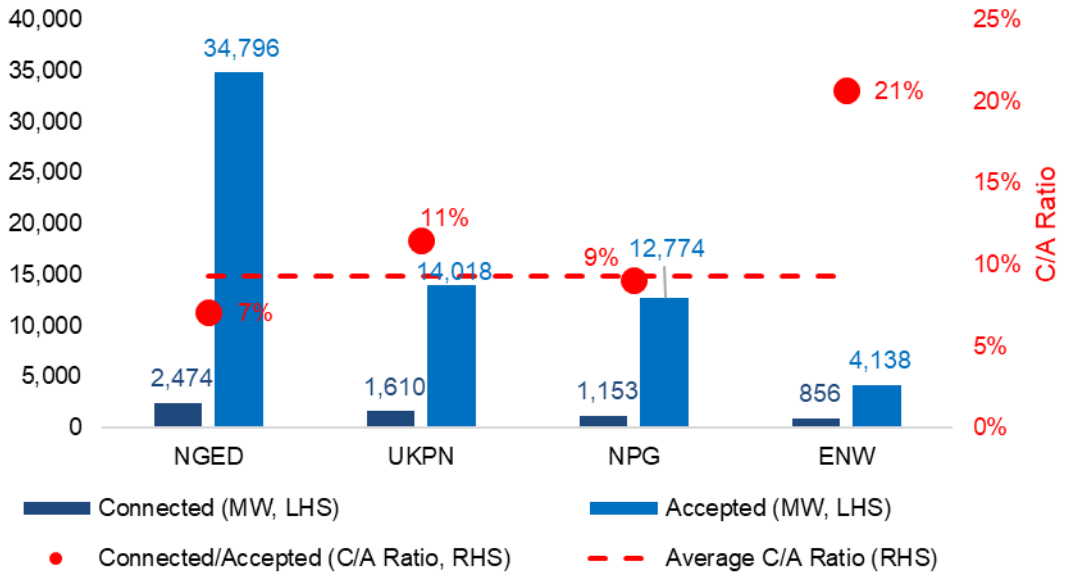
C/A Ratio = Connected Capacity/ Accepted Capacity,

to compare the already connected registered capacity with the accepted to connect registered capacity over a given period. A higher C/A ratio indicates a DNO holds relatively less accepted offers comparing to their existing capacity, meaning that this DNO is relatively more "efficient" in connection work that other DNOs over the given period. The C/A Ratio also roughly indicates the probability of an accepted offer to be connected without a delay in a DNO.

NGED has the lowest C/A ratio, 24%, followed by SSE and NPG with round 30%. This means that NGED, SSE and NPG carry a heavier burden to scale their size in the next few years and developers may expect a long waiting list in front of their accepted offers to be connected in time. By contrast, the C/A ratio of SPEN, UKPN and ENW are just above 55%, meaning that there is a relative shorter waiting-to-connect list in these DNOs.

A more insightful view of the C/A ratio for the trend of recent years is shown in **Figure 3-2** where the connected capacity and accepted capacity since 2017 is compared. SSE and SPEN are excluded due to data quality issue illustrated in **Table 2-1**. The industry average C/A Ratio is 9%. ENW has the largest C/A Ratio of 21%, whilst NGED, with a lowest C/A ratio of 7%, indicating the overwhelmed accepted capacity in NGED in recent years.

Figure 3-2: Connected capacity versus accepted capacity by DNO since 2017



The Overdue Ratio: Accepted but Not Connected Over 3 Years

Offers being accepted by clients without a timely connection work followed may create "empty" capacity occupation in the DNO grids for years. Those overdue capacities may block other clients from applying for offers and cause potential further delays in achieving the Net Zero goal.

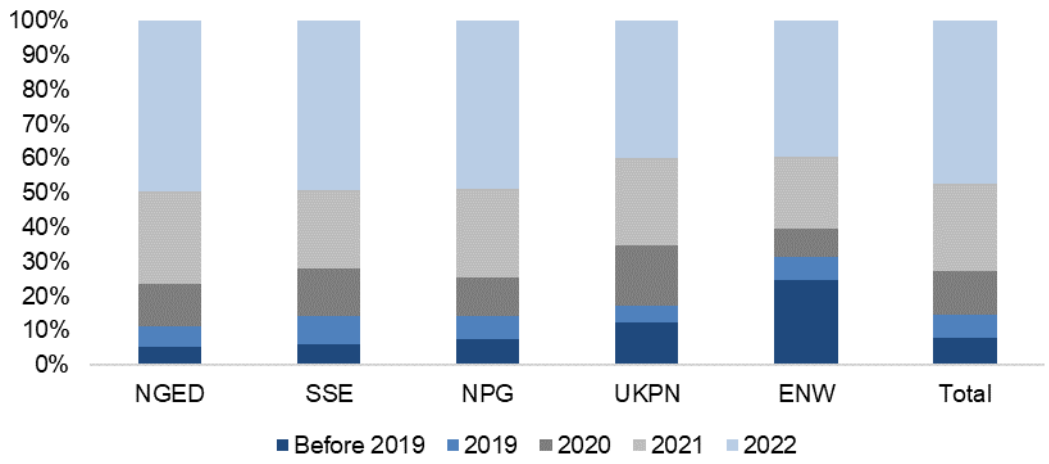
Table 3-1: Accepted capacity (MW) by year for each DNO

	Before 2019	2019	2020	2021	2022	Overdue Ratio
NGED	1,861	2,156	4,308	9,530	17,562	5%
SSE	994	1,357	2,269	3,783	8,096	6%
NPG	986	864	1,469	3,330	6,343	8%
UKPN	1,804	664	2,531	3,676	5,746	13%
ENW	1,156	319	377	975	1,849	25%
Total	**6,800**	**5,360**	**10,954**	**21,294**	**39,597**	**8%**

Table 3-1 and Figure 3-3 show the accepted capacity and its proportion by year for each DNO where the **Overdue Ratio** is calculated by the capacity accepted before 01/01/2019 over the total accepted capacity. Only 5% of the accepted offers are registered before 2019 in NGED comparing to the industry average of 8%. Whilst ENW has the highest **Overdue Ratio** 25%, meaning that 1/4 of its accepted offers have been wating to connect for more than 3 years.

A lower **Overdue Ratio** also indicates a fast-rising trend in the accepted offers after 2019. NGED and UKPN show a peak of the accepted capacity in 2021, and this peak lowers their overdue ratio.

Figure 3-3: Proportion of accepted capacity (MW) by year for each DNO



FORECAST

Trend and Forecast: Connection to Catch Up with the Acceptance

UK's PM Boris Johnson has said 100% of the country's electricity could come from renewables by 2035. This goal will push the fast growth of renewable capacity plugging into the DNO grids leading to a continuity of the rising trend of accepted capacity as shown in Figure 3-7 in the next few years.

Following the incremental accepted offers, the connection works in each DNO shall see a continuous expansion which has already started in 2021 as shown in Figure 3-8 and this expansion will highly likely be driven by battery storage and photovoltaic technologies.

Figure 3-4: The growth of accepted capacity from 2020 to 2022 by DNO

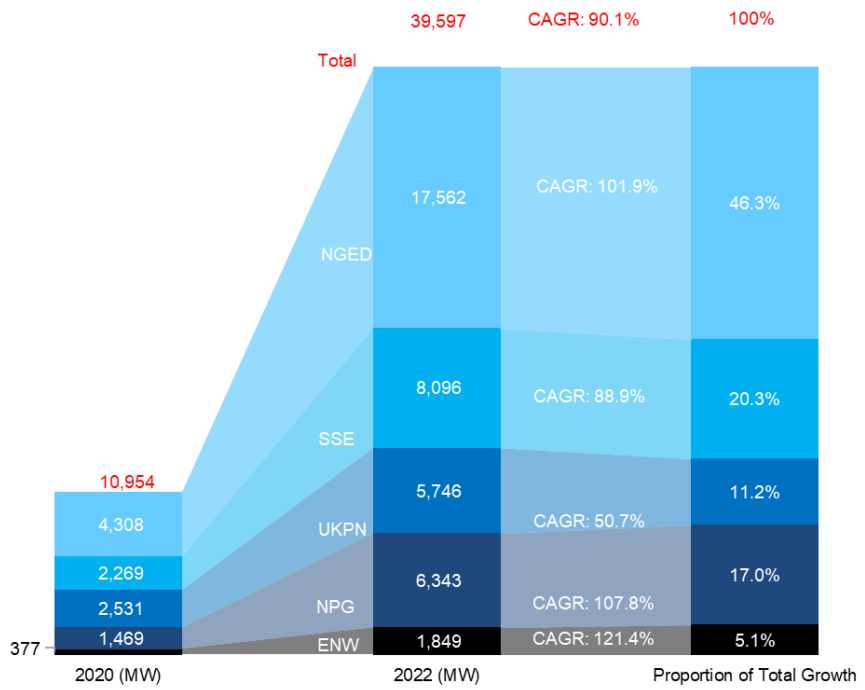


Figure 3-4 shows the growth of accepted capacity from 2020 to 2022 by DNO with their compound annual growth rate (CAGR) and the proportion of the contribution of each DNO to the total growth of accepted capacity. The total accepted capacity has climbed from 10,954MW in 2019 to 39,597MW in 2021 with a CAGR of 90.1%. NGED is the largest contributor to the growth with a 46.3% contribution proportion and a CAGR of 101.9% increasing from 4,038MW to 17,562MW, followed by SSE contributing 20.3% of the total growth with a CAGR of 88.9%. NPG also plays a significant role in the growth contributing 17.0% with a CAGR of 107.8%.

Figure 3-5 presents the growth of accepted capacity from 2020 to 2022 by technology with their compound annual growth rate (CAGR) and the proportion of the contribution of each technology to the total growth of accepted capacity. We see battery storage is the largest contributor of the total growth boosting from only 1,743MW in 2020 to 24,951MW in 2022 resulting in a high CAGR of 278.3% and contributing 77.7% of the total growth. Followed is photovoltaic sharing 17.4% of the total growth by an increase of capacity from 7,593MW in 2020 to 12,802MW in 2022 leading to a CAGR of 29.8%. Onshore wind only contributes 2.8% of the growth from 2020 to 2022. **Figure 3-5** indicates that the battery storage

and photovoltaic technologies have dominated the growth of the market in recent years, especially the battery storage market which has seen a dramatic rising trend.

Figure 3-5: The growth of accepted capacity from 2020 to 2022 by technology

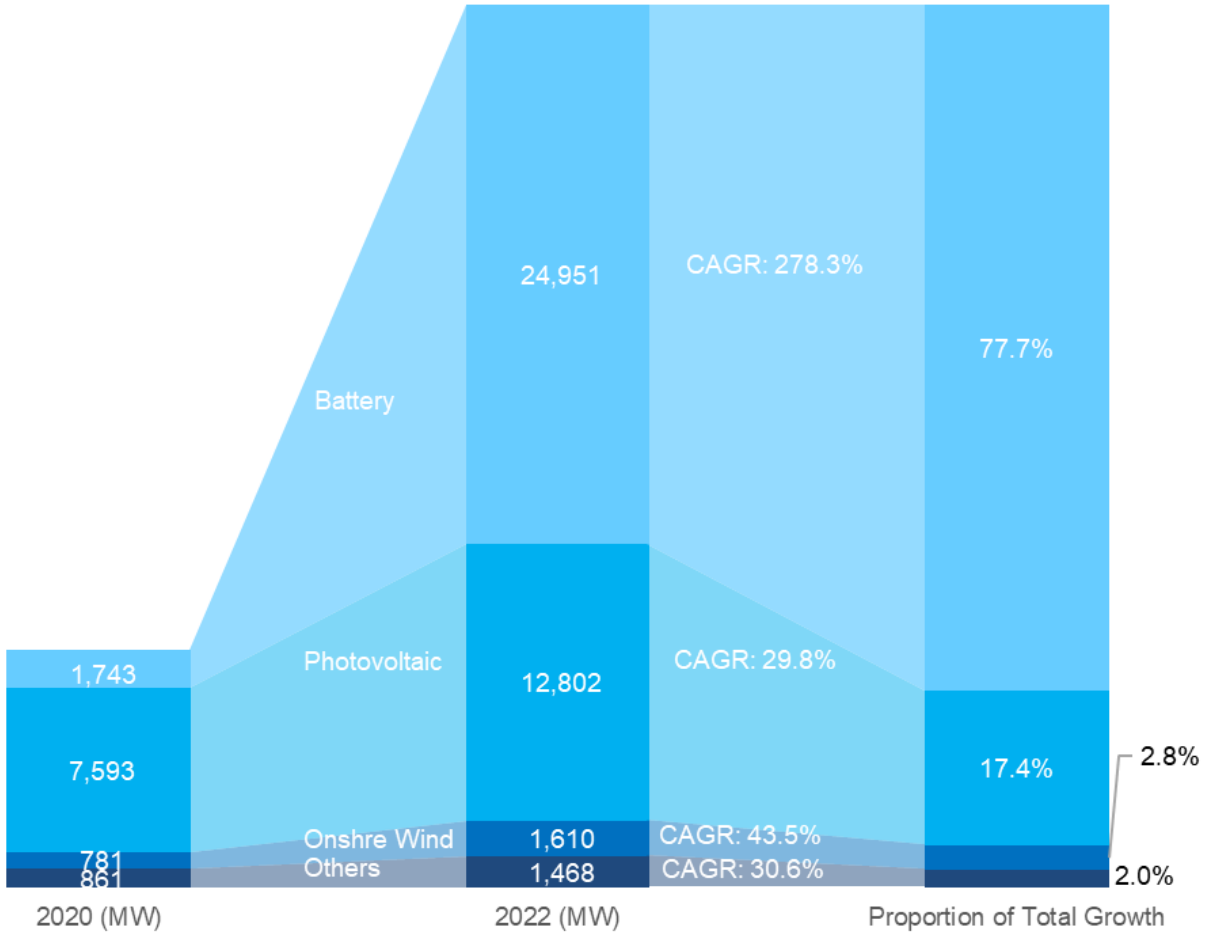
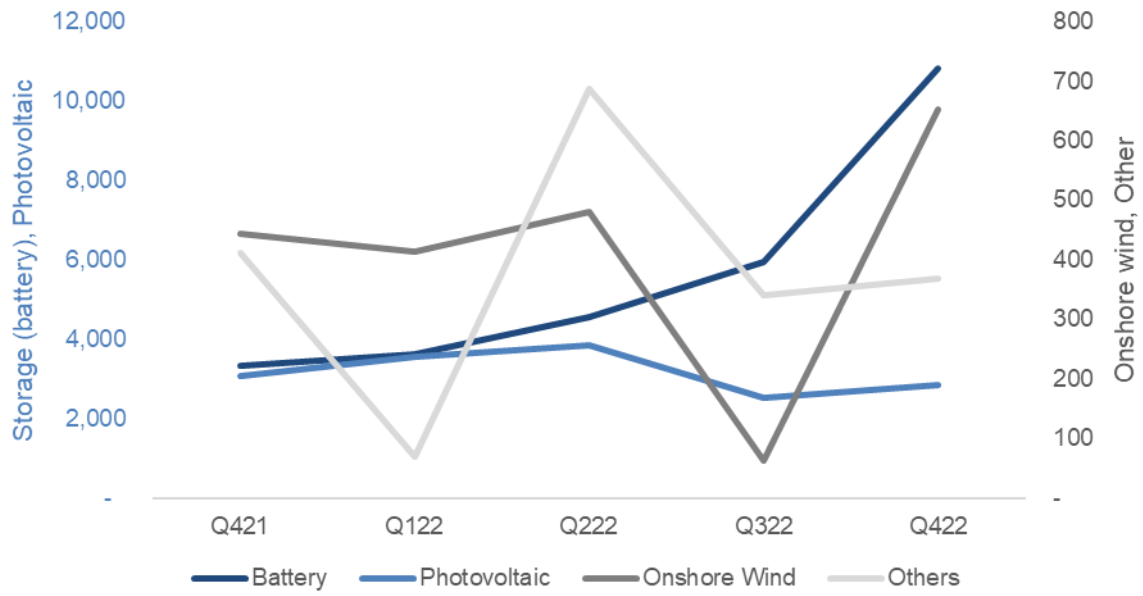


Table 3-2: QoQ and YoY of accepted capacity (MW) by quarter for each technology

	Q421	Q122	QoQ	Q222	QoQ	Q322	QoQ	Q422	QoQ	YoY
Battery	3,337	3,623	8.6%	4,571	26.2%	5,939	29.9%	10,817	82.1%	**224.1%**
Photovoltaic	3,076	3,566	16.0%	3,845	7.8%	2,532	-34.2%	2,859	12.9%	**-7.0%**
Onshore Wind	443	413	-6.8%	481	16.3%	64	-86.8%	652	927.3%	**47.2%**
Others	411	70	-83.0%	687	882.5%	342	-50.2%	369	8.1%	**-10.2%**
Total	**7267**	**7673**	**5.6%**	**9583**	**24.9%**	**8876**	**-7.4%**	**14698**	**65.6%**	**102.2%**

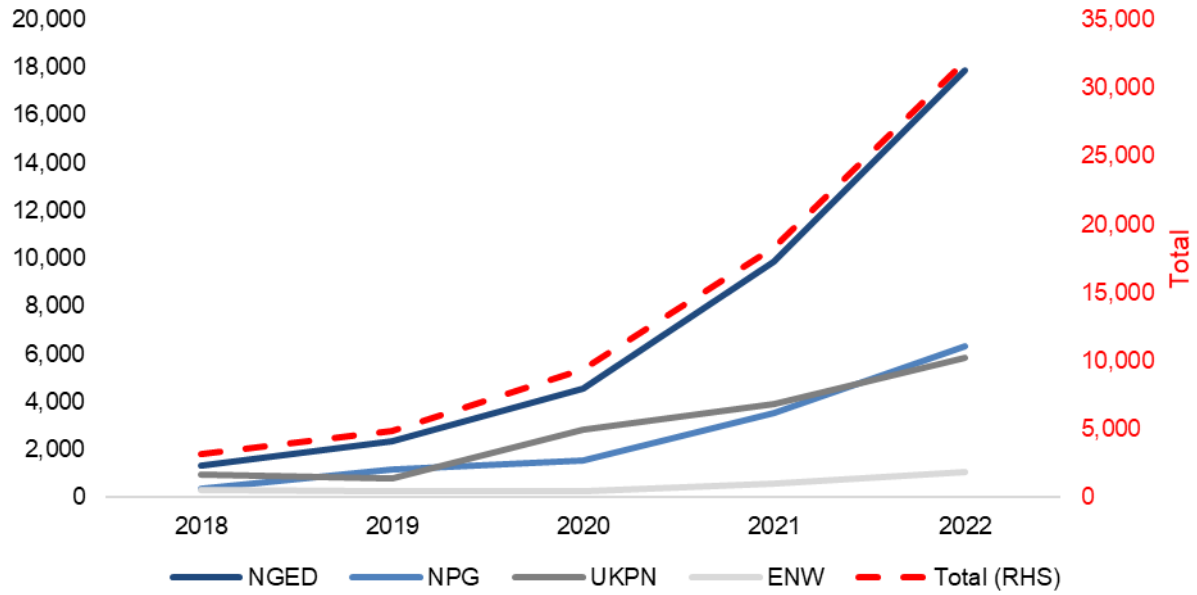
An insight of the recent growth of the accepted capacity is shown in **Figure 3-6** and **Table 3-2** where we use "Q122" to denote the first quarter in 2022. Over the last 5 quarters, we see the accepted capacity approximately tripled in the battery storage market from 3,337MW to 10,817MW. Onshore wind has also experienced a fast growth from 443MW in Q421 to 652MW in Q422 with an annual growth rate of 47.2%. The accepted capacity for photovoltaic market keeps steady around 2GW to 3GW peaked in Q222 with 3,845MW. Other technology has seen a fast drop (YoY, -10.2%) from 411MW in Q421 to 369MW in Q422. The growth of the total accepted capacity has peaked in Q422 with 65.6% QoQ growth rate followed by 24.9% in Q222 and a negative rate of -7.4% in Q322.

Figure 3-6: The accepted capacity (MW) by quarter for each technology



We noticed that the "date accepted" item will be deleted in DNO's ECR data sheets once an accepted offer has completed its connection. In order to gauge the historical trend of accepted offers more accurately, we define the **incremental capacity** as the accepted capacity plus the connected capacity in each year for each DNO.

Figure 3-7: The incremental capacity (MW) by year for each DNO (excl. SSE and SPEN)



We show the trend of the **incremental capacity** by year for each DNO in **Figure 3-7**, where we see a boosting of **incremental capacity** from approximately 3.1GW to 32GW in total in the four DNOs since 2018 to 2022. NGED has been leading the market, with its **incremental capacity** exponentially increased from about

1.3GW to more than 18GW, flowed by UKPN from less than 1GW to around 6GW. We do not show the trend for SSE and SPEN since there are too many records without a date of connection or acceptance in these two DNO's ECR data sheets, as shown in **Table 2-1**.

Although the boiling market has generated a large volume of accepted offers, the connected capacity has just reached its trough in 2020 after the peak in 2015, as shown in **Figure 3-8**. The contrary trend in the accepted offers and the connected offers in recent years means that the recent boosting accepted offers will drive the connection work to be deployed in the next few years and pushing a new peak for the connected capacity.

Figure 3-8: The connected capacity (MW) by year for each DNO

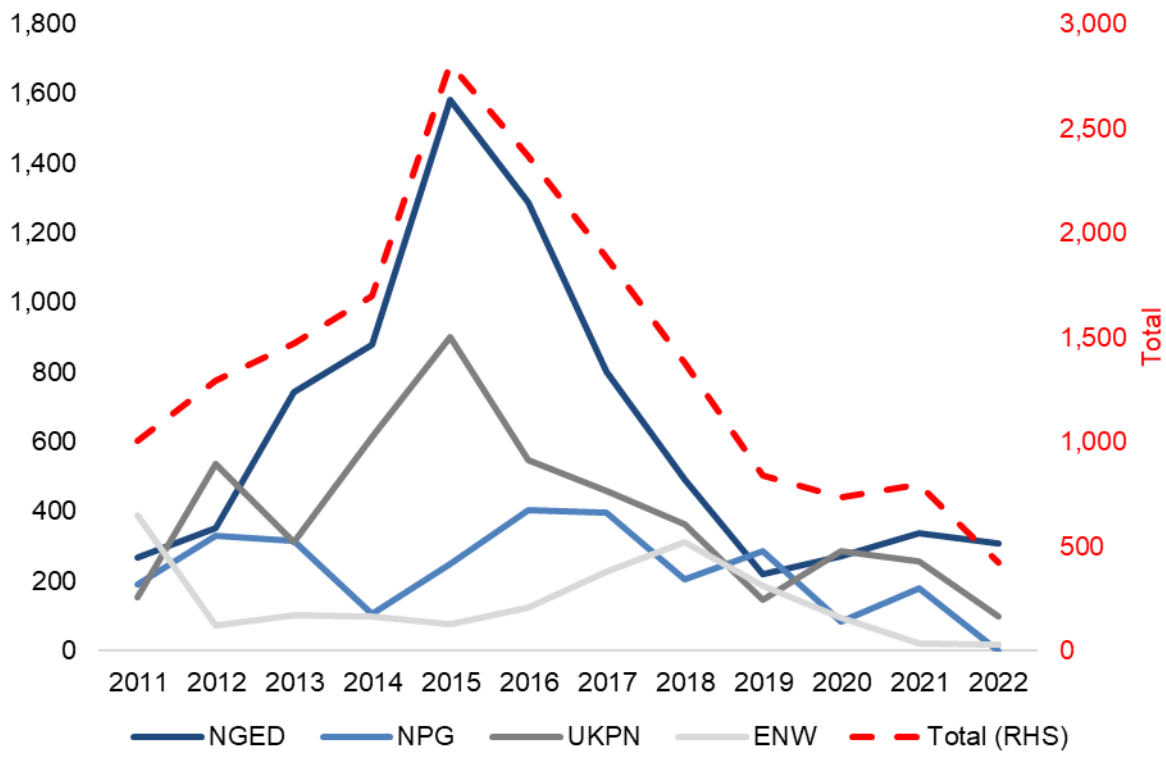
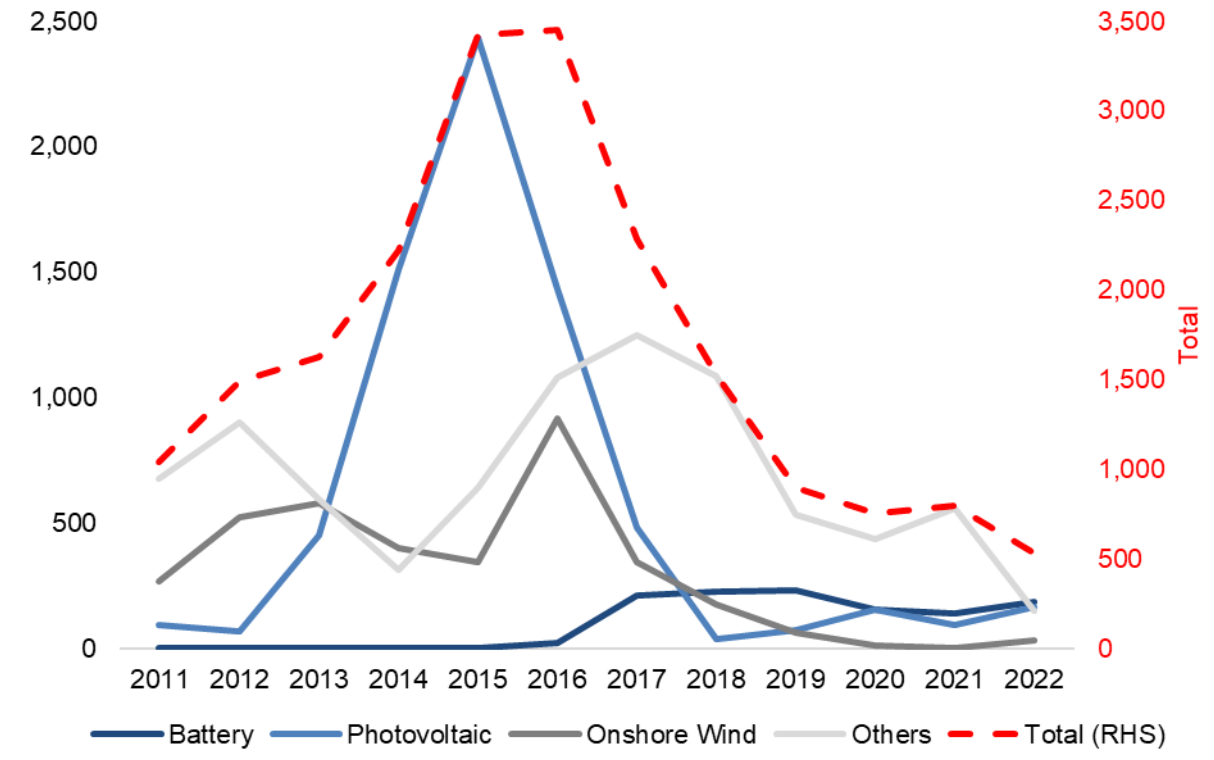


Figure 3-9 provides an overview of the connected capacity for each technology since 2011 to 2022. A peak of nearly 3.5GW total connected capacity was mainly driven by the 2.5GW photovoltaic connections in 2015. However, the connection capacity decreased fast after the peak. We show a boosting trend of the accepted offers of battery storage and photovoltaic in **Figure 3-5**. The accepted capacity for battery storage has overtaken that of the photovoltaic as shown in **Table 3-2**. This means that the coming peak of the connected capacity will highly be driven by battery storage followed by photovoltaic in the next few years.

Figure 3-9: The connected capacity (MW) by year for each technology



Chapter 4. Detailed Analysis of Accepted Offers at Distribution Grid

This chapter provides a detailed analysis of the accepted offers at the distribution grid level.

- We present the accepted offers by year, technology, PoC voltage and top players, showing the accepted capacity are boosting in the recent years, dominated by battery storage and photovoltaic, at 132kV and 33kV.
- By showing technology used in accepted offers by year, we find the battery storage capacity grows fast, leading the market with photovoltaic.
- The analysis of the PoC voltage of the accepted offers for various technologies indicates that battery storage and photovoltaic capacities are mostly accepted with a PoC voltage of 132kV, and onshore wind on 33kV.
- We show the change of the market share of the PoC voltage for the accepted offers across time, seeing a rising trend of the market share for connections on 132kV and a shrink on 33kV.

Accepted Offer by Year, Technology, Voltage and Top Players

Figure 4-1 shows the analysis of the accepted capacity versus connected capacity and accepted capacity by year, technology, voltage and top players.

Accepted vs Connected: the total accepted capacity versus the total connected capacity has reached 74:26 meaning that DNO grid is expected to grow fast in the foreseeable future.

Accepted capacity by year: the market has been rising from 2019 and becomes boiling in 2022 when there is more than 39GW capacity accepted to connect counting 46% of the total accepted capacity.

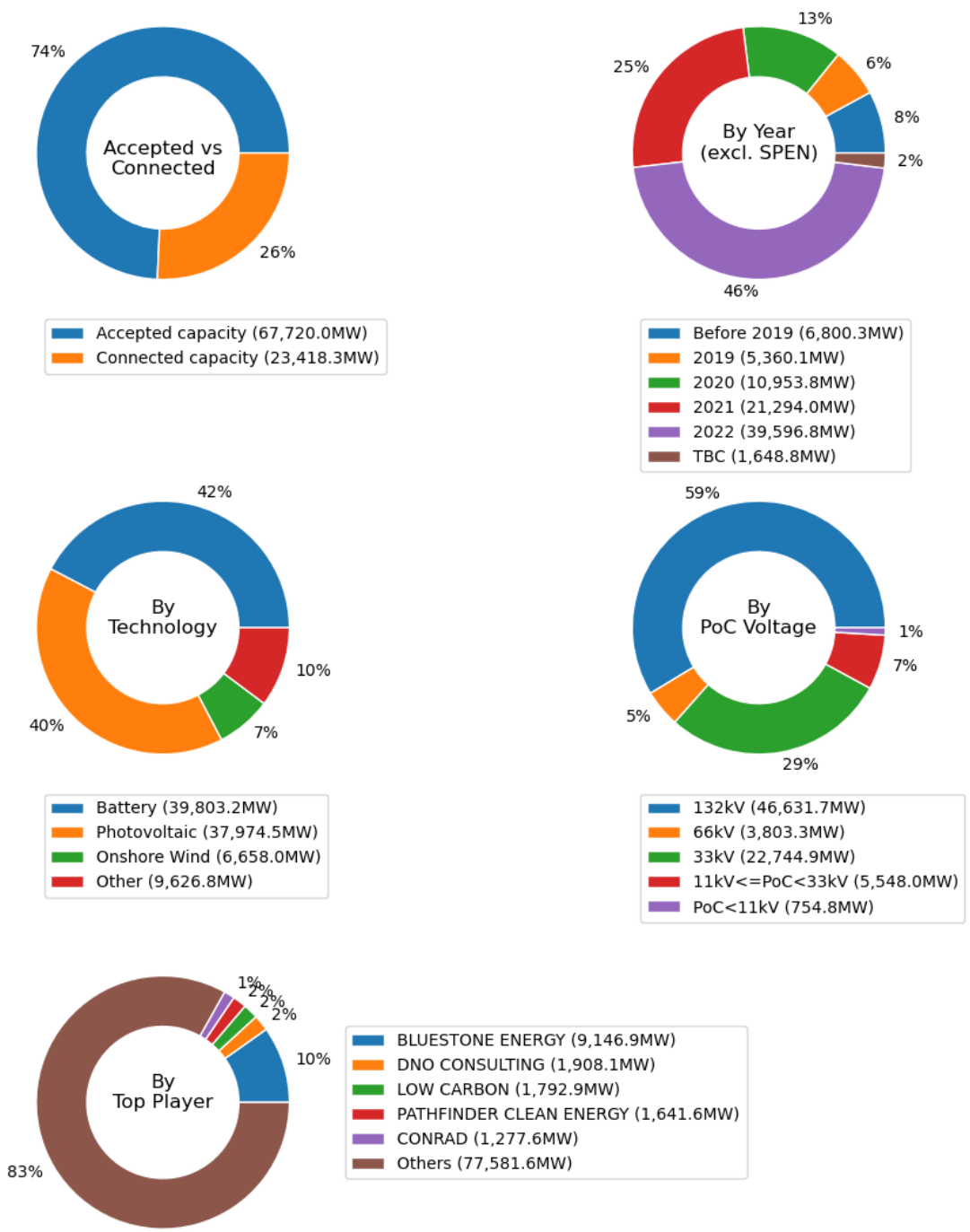
Accepted capacity by technology: battery storage leads the market with more than 39.8GW accepted counting 42% of the total accepted capacity, followed by about 38GW battery storage which takes 40% of the total accepted capacity. The rest of the market is shared by onshore wind (6.7GW, 7%) and other technologies (9.6GW, 10%).

Accepted capacity by PoC voltage: 132kV is the most popular voltage level for point of connection (PoC), with 46.6GW counting 59% of the total accepted capacity, followed by 33kV with 22.7GW, 29%. Voltage levels between 11kV (incl.) and 33kV (excl.) takes 7% of the market ahead of the 5% taken by 66kV. Voltage levels below 11kV, with 754.8MW accepted capacity, only counts 1% in the market.

Top Players: approximately 17% of the accepted capacity is taken by the top 5 players. Bluestone Energy is the largest player holding 9.1GW counting 10% of the total market, followed closely by DNO Consulting, Low Carbon and Pathfinder Clean Energy 2% market share, respectively. With 1% market sharing, Conrad is the fifth largest developers.

Detailed site information of the top players is available in Appendix A, Chapter 9.

Figure 4-1: Accepted Capacity by Year, Technology, Voltage and Top Players



Technology by DNO: NGED Dominates Battery Storage and Photovoltaic, SSE Leads Onshore Wind

The battery storage and photovoltaic offers are dominated by NGED, with 14,653MW and 17,674MW (Figure 4-2) capacity counting 41% and 46% (Figure 4-3) of NGED's total accepted capacity, respectively. SSE leads the onshore wind market with 2,895MW (Figure 4-2) sharing 33% (Figure 4-3) of its total capacity.

Figure 4-2: Proportion of accepted capacity in each DNO by technology

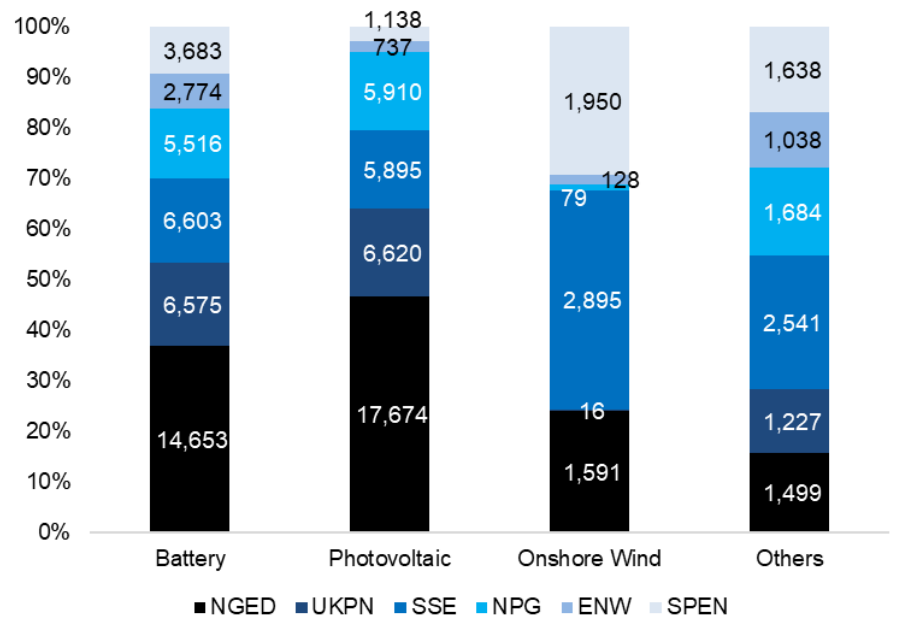
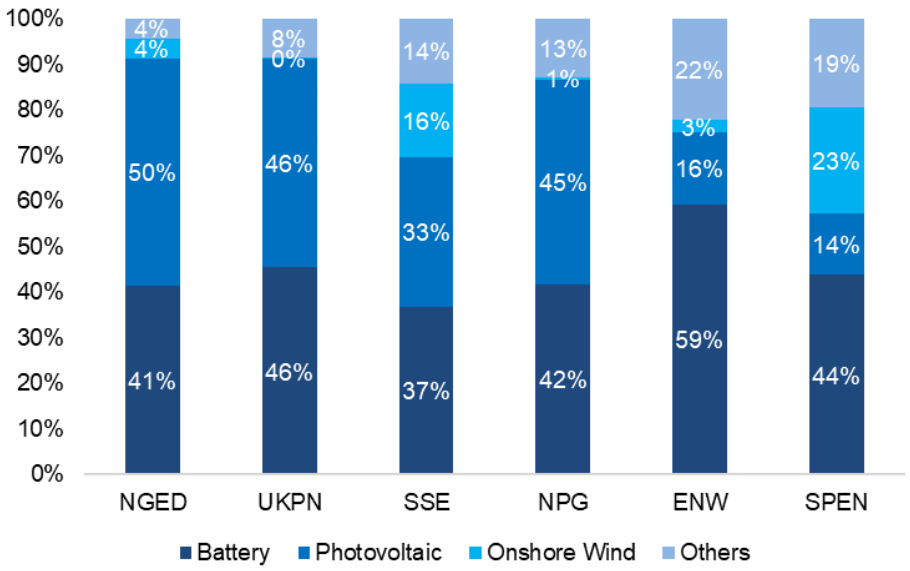


Figure 4-3: Proportion of accepted capacity of each technology by DNO



Proportion of Accepted Capacity by DNO and PoC Voltage

Figure 4-4 shows that the total capacity of the accepted offers ranging from 10MW to 50MW shares more than half of the market in all DNOs. Large stations (>100MW) are mainly located in NGED, UKPN and NPG, and mainly to be connected on a PoC of 132kV as shown in Figure 4-5. Figure 4-5 also indicates that PoC of 33kV and below will connect most of the capacity from sites below 10MW and 132kV will dominate the connections above 50MW.

Figure 4-4: Proportion of total capacity for different site size by DNO

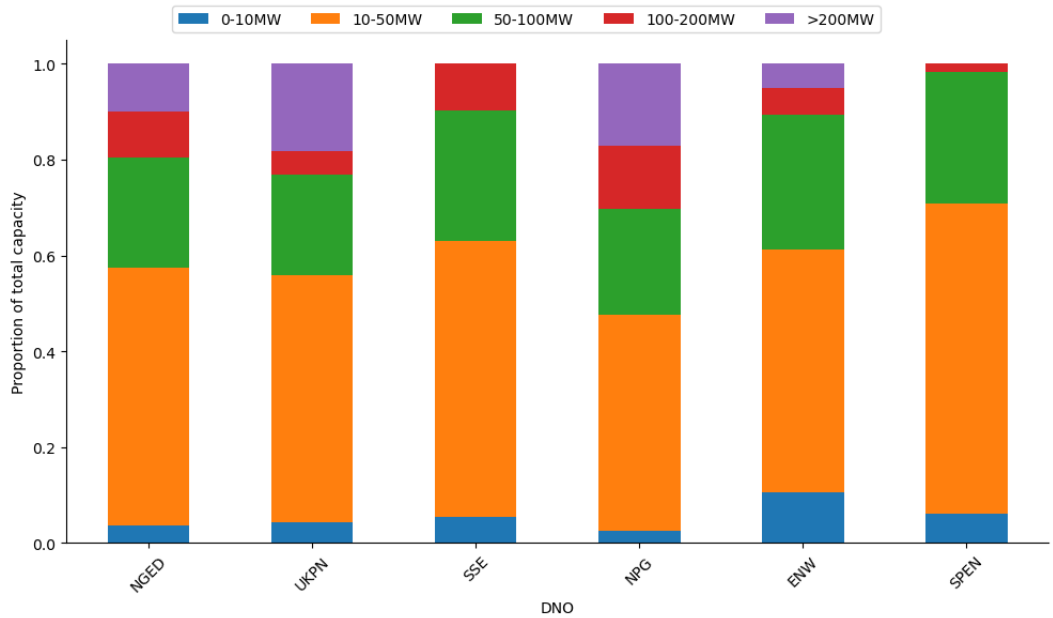
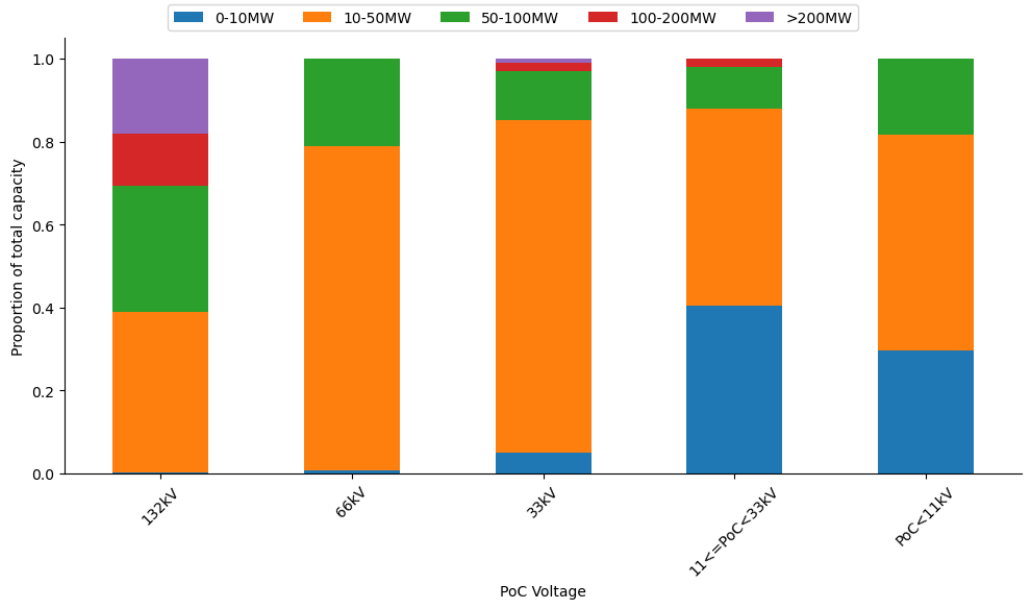


Figure 4-5: Proportion of total capacity for different site size by PoC voltage



Technology by Year: Battery Storage Boosting, Leading the Market with Photovoltaic

Figure 4-6: Yearly accepted offers of various technologies since 2018

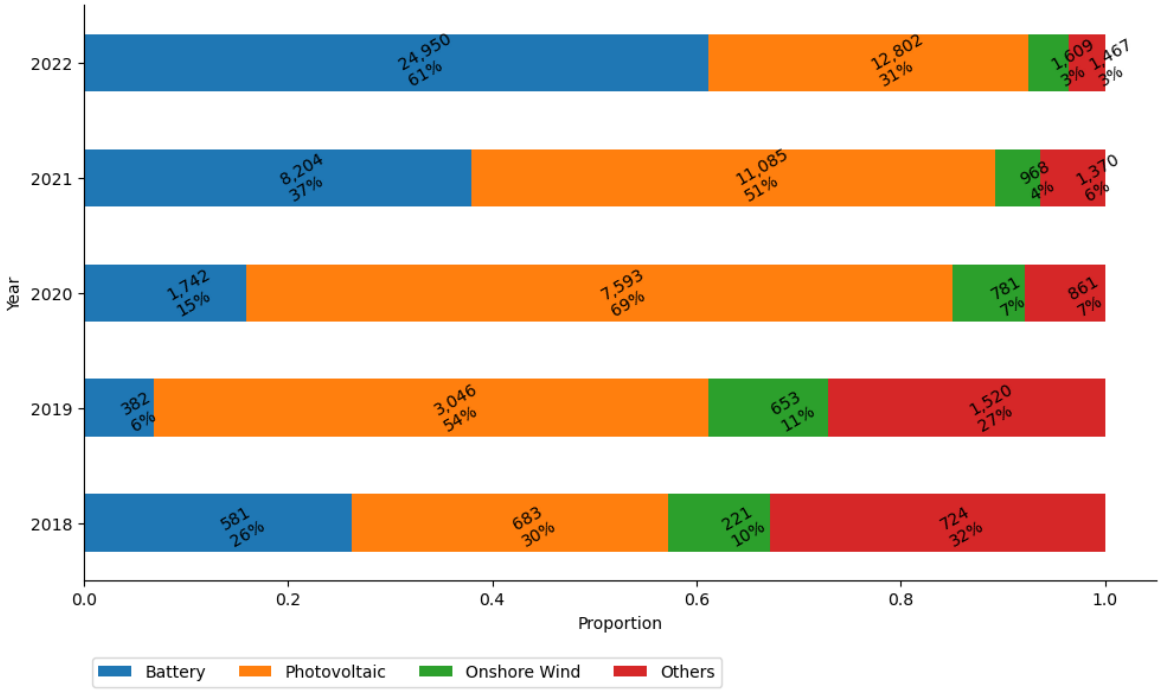


Figure 4-6 shows the yearly accepted capacity and market proportion for various technologies since 2018. We see an exponential rising trend for the battery storage market from 2019 with capacity increasing from 382MW to 25GW corresponding to a market share boosting from 6% to 61%. The market share of the photovoltaic peaked at 69% in 2020 with 7.6GW after climbing from 2018 (30%) and 2019 (54%). Although the accepted capacity of photovoltaic keeps growing in 2021 and 2022, its market share decreased to 51% in 2021 and 44% in 2022 due to the fast development in battery storage. We also notice the market share of battery storage surpasses that of photovoltaic in 2022, with an accepted capacity of 25GW versus 13GW. Because of the growth of battery storage and photovoltaic, the market proportion of onshore wind and other technologies gradually declines.

PoC Voltage by Technology: Battery and Photovoltaic on 132kV, Onshore Wind on 33kV

We show the capacity at various PoC voltage levels of accepted offers for different technologies in **Figure 4-7**. The most popular connection voltage for battery storage system is 132kV which will digest about 25GW capacity taking 73% of the total battery capacity, followed by 33kV with 6.8GW counting 19%. 132kV and 33kV are also the main PoC voltage levels for photovoltaic offers, with 18.8GW and 10.3GW connections counting 55% and 30% of the total photovoltaic capacity,

respectively. 33kV dominated 66% of the connection work for onshore wind offers, with more 3GW to be connected.

Figure 4-7: PoC voltage of accepted offers by technology

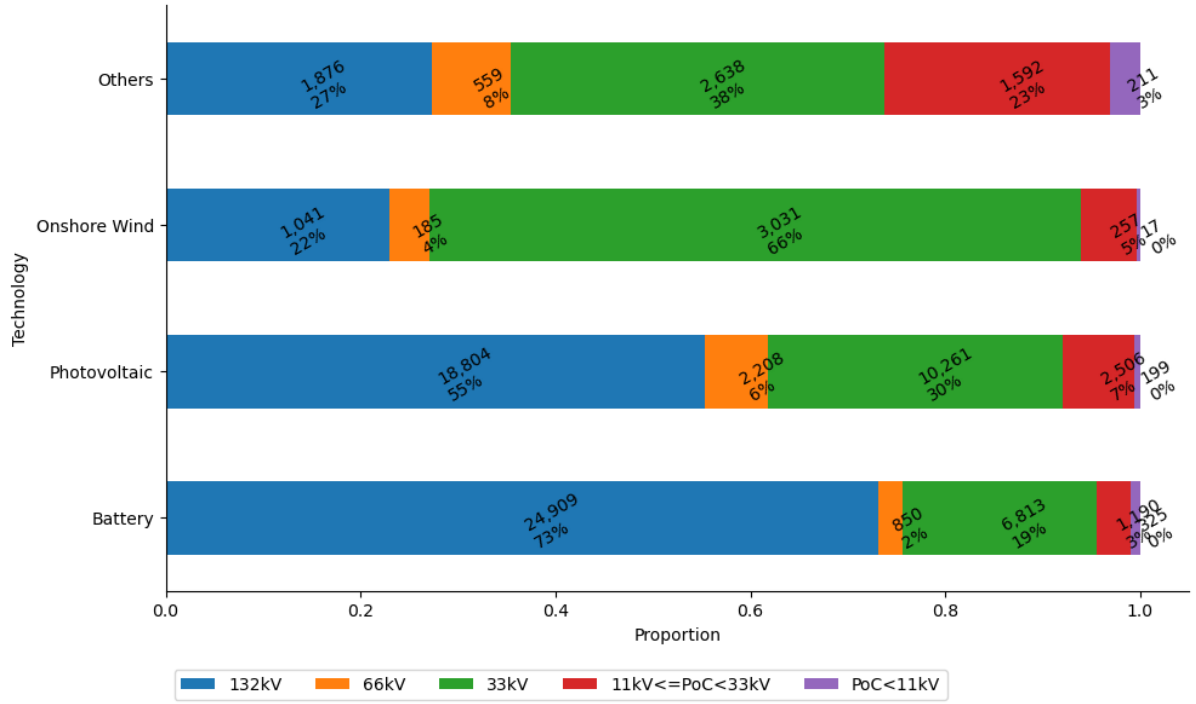
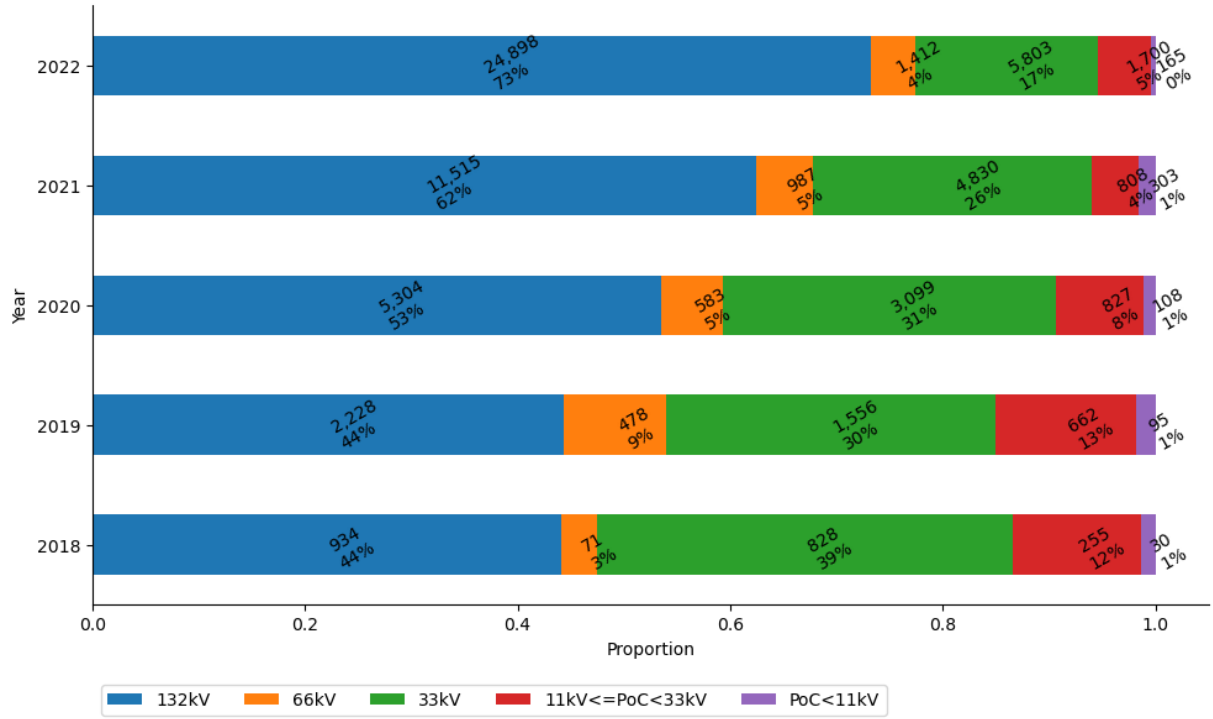


Figure 4-8: PoC voltage of accepted offers by year



PoC Voltage by Year: 132kV Leads the Market Share and Keeps Rising, Market Share of 33kV Halved

Figure 4-8 shows the capacity and market share for different PoC voltage levels of accepted offers by year since 2018. 132kV has been leading the PoC voltage of accepted offers since 2018 with nearly 1GW (44% market share) and keeps rising to about 25GW in 2022 sharing 73% of the market. The offers to be connected on 33kV increased in absolute capacity from less than 1GW in 2018 to more than 5.8GW in 2022, but its market share has dropped from 39% to 17% giving way to the boosting capacity in 132kV.

Top Players in Each Technology Area

Bluestone Energy leads battery storage, Low Carbon dominates photovoltaic and TNEI leads onshore wind

Table 4-1 presents the top 5 players in each technology area with their accepted capacity (MW) and market share. Bluestone Energy leads the battery storage market with more than 7,755MW capacity counting 19.6% of the battery storage market. Low Carbon holds nearly 1.8GW photovoltaic offers dominating the photovoltaic area with 4.6% market share. TNEI is the largest player (8% market share) in the area of onshore wind technology with more than 525MW accepted capacity.

Table 4-1: Top players of accepted offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [7,755.1, 19.6%]	LOW CARBON [1,752.9, 4.6%]	TNEI [525.6, 8.0%]	STOR [401.3, 4.3%]
2	GREEN SWITCH CAPITAL LIMITED [875.8, 2.2%]	PATHFINDER CLEAN ENERGY [1,503.5, 4.0%]	WIND 2 LTD [459.8, 7.0%]	DNO CONSULTING [401.2, 4.3%]
3	CONRAD [781.0, 2.0%]	BLUESTONE ENERGY [1,391.8, 3.7%]	CENIN [332.9, 5.1%]	CONRAD [263.4, 2.8%]
4	FPC ELECTRIC LAND [757.0, 1.9%]	JBM [1,058.5, 2.8%]	ENERGIE KONTOR [263.9, 4.0%]	PEEL ENVIRONMENTAL [170.4, 1.8%]
5	BALANCE POWER [728.7, 1.8%]	DNO CONSULTING [976.9, 2.6%]	EVANS ENERGY [211.2, 3.2%]	SWECO [169.6, 1.8%]
Total	**[10,897.6, 27.5%]**	**[6,683.6, 17.7%]**	**[1,793.4, 27.4%]**	**[1,406.0, 15.0%]**

The top 5 players in battery storage take approximately 27.5% of the market with more than 10GW capacity. About 6.7GW photovoltaic offers are held by the top 5 players with 17.7% market share. More than 27% of the onshore wind market is controlled by the top 5 players with nearly 1.8GW capacity.

Detailed site information of the top players is available in Appendix C, Chapter 9.

Top Players by Year

EEB and DNO consulting dominated the market in 2018 and 2019, respectively, surpassed by Low Carbon in 2020 and 2021, whilst Bluestone Energy took over the champion in 2022

Table 4-2: Top players of accepted offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	EEB [125.0, 5.7%]	DNO CONSULTING [327.5, 5.9%]	LOW CARBON [529.6, 4.8%]	LOW CARBON [549.0, 2.5%]	BLUESTONE ENERGY [8,177.5, 20.1%]
2	BALANCED GRID SOLUTIONS [98.9, 4.5%]	LIGHTSOURCE [227.3, 4.1%]	SOLAR CENTURY [426.4, 3.9%]	BLUESTONE ENERGY [493.8, 2.3%]	PATHFINDER CLEAN ENERGY [1,260.5, 3.1%]
3	JBM [84.9, 3.9%]	LOW CARBON [201.7, 3.6%]	JBM [319.5, 2.9%]	ANGLO [449.0, 2.1%]	GREEN SWITCH CAPITAL LIMITED [1,112.7, 2.7%]
4	AURA POWER [80.0, 3.6%]	JBM [197.7, 3.6%]	DNO CONSULTING [278.8, 2.5%]	JBM [426.9, 2.0%]	CONRAD [819.3, 2.0%]
5	ORKNEY ISLANDS COUNCIL [73.5, 3.3%]	EEB [190.0, 3.4%]	AURA POWER [249.6, 2.3%]	INNOVA [396.8, 1.8%]	DNO CONSULTING [805.7, 2.0%]
Total	**[462.3, 21.0%]**	**[1,144.2, 20.6%]**	**[1,803.9, 16.5%]**	**[2,315.5, 10.7%]**	**[12,175.7, 29.9%]**

Table 4-2 shows the top players by accepted capacity in each year since 2018. EEB leaded the market in 2028 with 125MW capacity (5.7% market share). DNO consulting dominated the market in 2019 with 328MW (5.9%). Low Carbon took the champion in 2020 and 2021 counting 4.8% and 2.5% of the market by 529.6MW and 549MW, respectively. Bluestone Energy surpassed other developers in 2022, with nearly 8,178MW capacity sharing 20.1% of the market.

Totally, the market share of the top 5 players has decreased from 21% to 10.7% from 2018 to 2021 although the absolute capacity dramatically increased from 462MW to 2,315MW. Whilst, the top 5 players have started to share more capacity in 2022 with nearly 30% market share and more than 12GW capacity, due to the fast growth of Bluestone Energy.

Detailed site information of the top players is available in Appendix E, Chapter 9.

Chapter 5. Detailed Analysis of Connected Offers at Distribution Grid

This chapter analyses the offers that have been connected from 2018 to 2022 at distribution grid level.

- We present a contrary trend of the connected offers comparing to the accepted offers in recent year. Unlike the boosting accepted capacity, connected capacity had been declining. Accepted offers are led by photovoltaic, battery storage and the 132kV PoC voltage as shown in Chapter 4, but the connected offers had been dominated by "other" technology and the 33kV PoC voltage.
- The analysis of PoC voltage of the accepted offers for various technologies indicates that 33kV dominated the connections for all technologies, in all years since 2018 to 2022 except for 2020.

Connected Offers by Year, Technology, Voltage and Top Players

Figure 5-1 shows the analysis of the accepted capacity versus connected capacity and accepted capacity by year, technology, voltage and top players.

Accepted vs Connected: the total accepted capacity over the total capacity since 2018 was 92:8 in distribution grid, higher than the ratio 74:26 shown in Figure 4-1 and the ratio 10.8x in Figure 2-2. This indicates that most offers have been accepted in recent years and the grid has a heavy connection work to be conducted in the next few years.

Connected capacity by year: the connected capacity had declined since 2018 to 2020 from 1.4GW to 733.1MW with a slight recovery to 797MW in 2021 and a low of 424MW in 2022, in sharp contrast to the rising trend of the accepted offers shown in Figure 4-1.

Connected capacity by technology: battery storage and photovoltaic took 17% and 15% of the connected capacity since 2018 to 2022, respectively, followed by onshore wind technology with 633.8MW, 9% market share. The rest 59% of the connected capacity was composed by other technologies. This reverses the impression from the accepted offers dominated by battery storage and photovoltaic as shown in Figure 4-1.

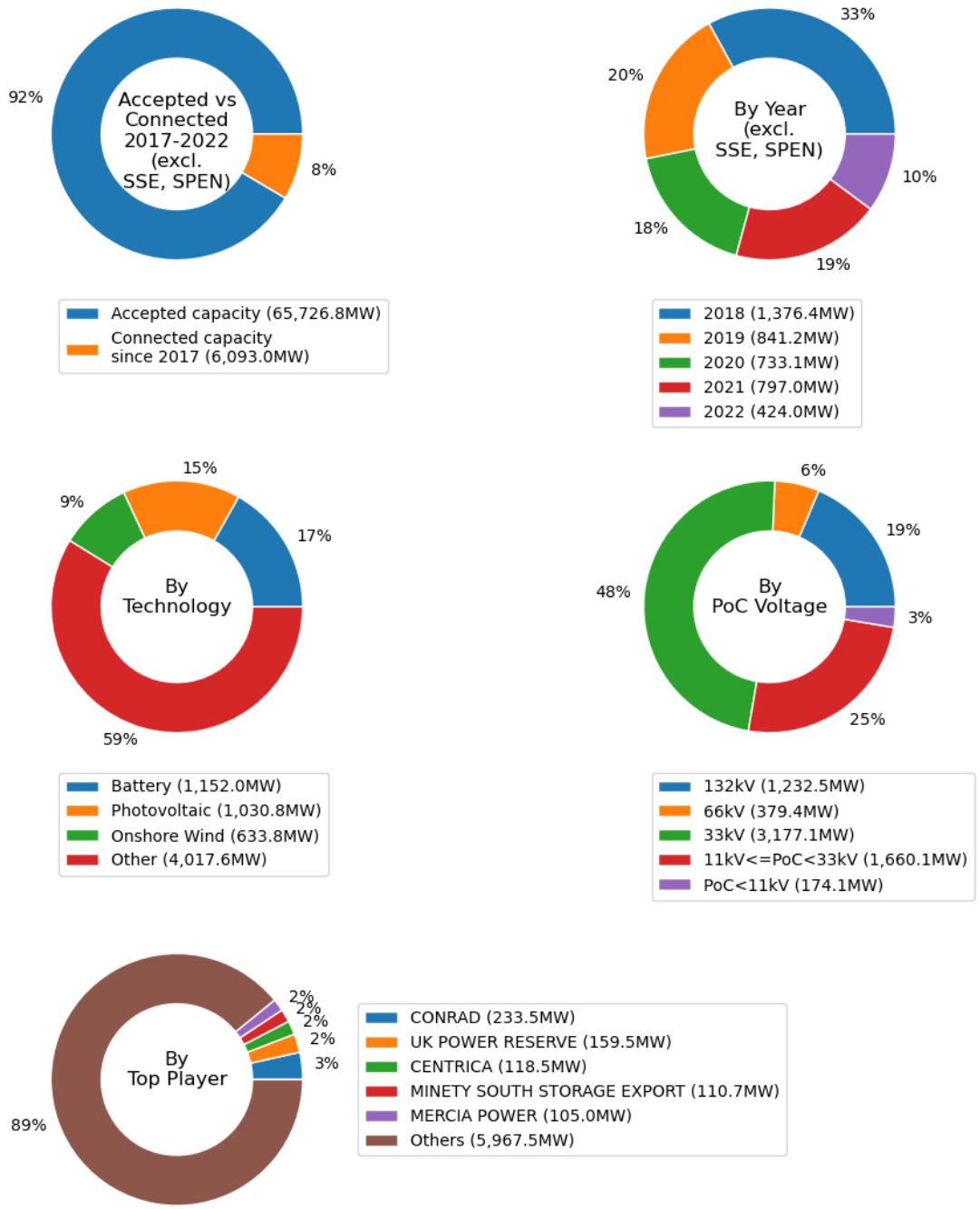
Connected capacity by PoC voltage: 33kV had been the most popular voltage level for point of connection (PoC), with 3.2GW counting 48% of the total connected capacity between 2018 and 2022, followed by the 25% market share of connections with PoC voltage levels between 11kV (incl.) and 33kV (excl.). This

means that the dominant voltage level of connected offers is lower than that (132kV) in the accepted offers (Figure 4-1), indicating a trend of the generation being expanded to a higher voltage level in the grid.

Top Players: Conrad led the market with nearly 234MW, 3% market share, followed by the other four top players taking 2% of the market share, respectively.

Detailed site information for the top players is available in Appendix B, Chapter 9.

Figure 5-1: Connected Capacity by Year, Technology, Voltage and Top Players



Technology by Year: Battery Storage and Photovoltaic Start to Dominate the Market in 2022

Figure 5-2: Yearly connected capacity of various technologies from 2018 to 2022

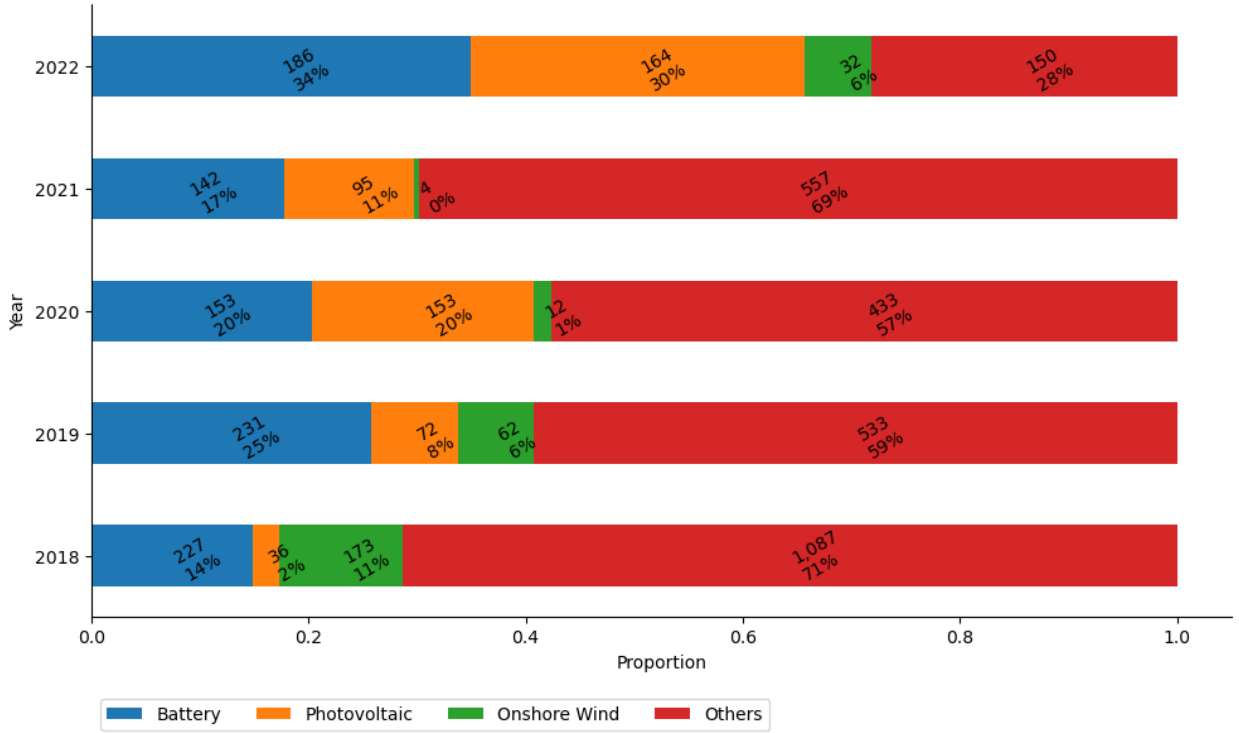


Figure 5-2 shows the yearly connected capacity and market proportion for various technologies from 2018 to 2022. The total connected capacity of battery storage, photovoltaic and onshore wind counted less than 50% from 2018 to 2021. But battery storage and photovoltaic start to dominate the market in 2022. The connection work had been dominated by other technologies which peaked in 2018 with 1.1GW, 71% market share. The connection of battery storage had declined from more than 200MW before 2019 to 153MW in 2020, 142MW in 2021 and 186MW in 2022. A diminishing trend happened in the connected onshore wind technology from 173MW in 2018 to only 4MW in 2021, but recovered to 32MW in 2022. The contrary trend of accepted offers shown in **Figure 4-6** indicates the DNO grid becomes “greener” by integrating more renewable generations and battery storage system.

PoC Voltage by Technology: 33kV Dominated the Connections for All Technologies

We show the capacity at various PoC voltage levels of connected offers for different technologies in **Figure 5-3**. The most popular connection voltage was

33kV which took more than half of the connection capacity for battery storage, photovoltaic and onshore wind systems, and about 43% for other technologies. 132kV connected 339MW battery storage system taking 32% of the total capacity. 358MW of the photovoltaic generation was connected to voltage levels between 11kV (incl.) and 33kV (excl.) counting 34% of the total capacity. In terms of onshore wind generations, 132kV and 66kV were sharing the similar proportion of 16% following the top proportion of 58% taken by 33kV.

Figure 5-3: PoC voltage of connected offers by technology

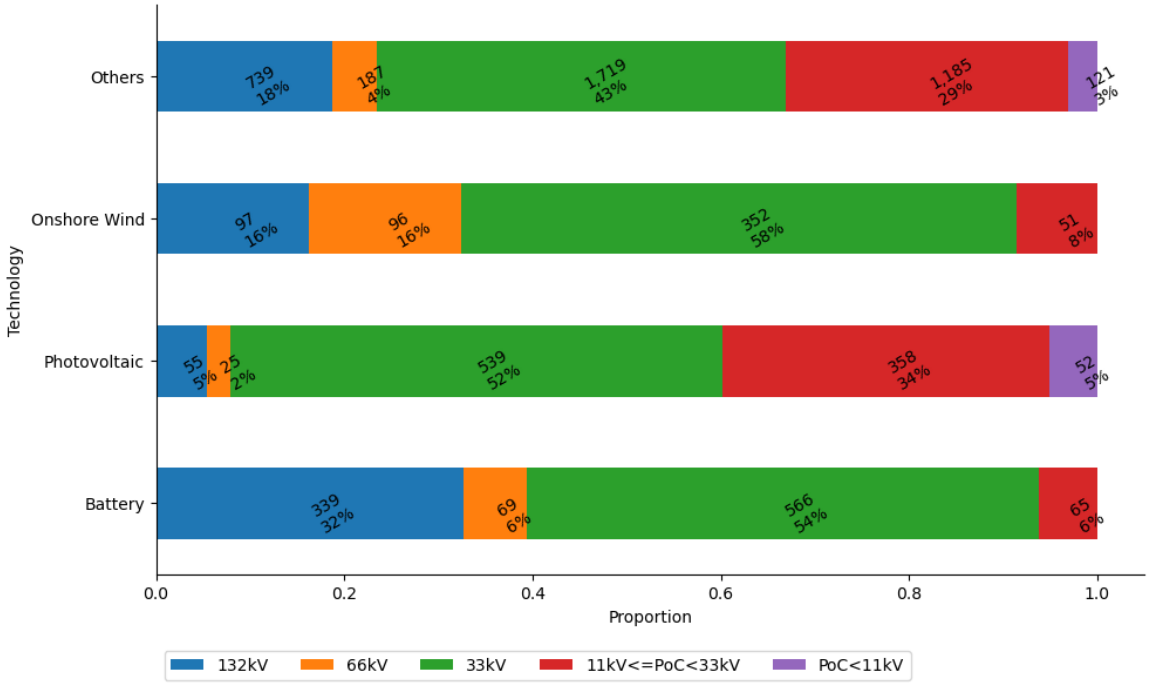
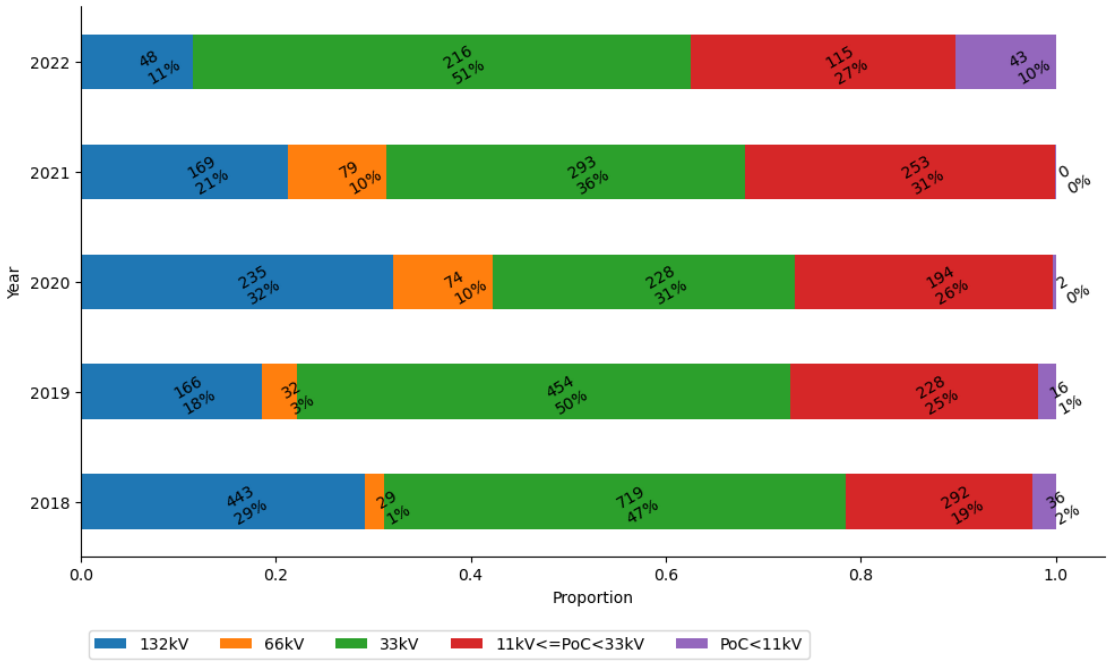


Figure 5-4: PoC voltage of connected offers by year



PoC Voltage by Year: 33kV Led the Market Share from 2018 to 2022 Except for 2020

Figure 5-4 shows the capacity and proportion for different PoC voltage levels of the connected offers from 2018 to 2022. 33kV dominated the connections in all years except for 2020. The market share of connected capacities on voltage levels between 11kV (incl.) and 33kV (excl.) kept around 20% to 30% over the 5 years, whilst 132kV fluctuated with a peak in 2020 surpassing the proportion of 33kV and a trough in 2022 taking only 11% of the connections.

Top Players in Each Technology Area

Min ETY South Storage Export led the battery storage market, Lightsource and INNOGY dominated the photovoltaic and onshore wind markets, respectively, Conrad led in other technologies.

Table 5-1 presents the top 5 players in each technology area with their connected capacity (MW) and market share from 2018 to 2022. Min ETY South Storage Export led the battery storage market with approximately 111MW capacity counting 9.8% of the battery storage market. Lightsource connected 68MW photovoltaic generation sites dominating the photovoltaic area with 6.6% market share. INNOGY was the largest player (14.3% market share) in the area of onshore wind technology with more than 90MW connected sites. Other technologies were dominated by Conrad with 233.5MW counting 6% of the total capacity.

Table 5-1: Top players of connected offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	MINETY SOUTH STORAGE EXPORT [110.7, 9.8%]	LIGHTSOURCE [68.0, 6.6%]	INNOGY [90.2, 14.3%]	CONRAD [233.5, 6.0%]
2	AURA POWER [59.9, 5.3%]	GREENFIELDS (F) LIMITED [53.9, 5.3%]	BRENIG [37.6, 5.9%]	UK POWER RESERVE [159.5, 4.1%]
3	CENTRICA; ATON ENERGY; STRATERA ENERGY LIMITED [50.0, 4.4%]	EEB [45.6, 4.4%]	NANCLACH LIMITED [37.1, 5.9%]	MERCIA POWER [105.0, 2.7%]
4	BURN PARK FARM ENERGY STORAGE; BLUEBELL ENERGY;	AEE RENEWABLES PLC [40.0, 3.9%]	NO INFO.; AUCHROBERT WIND ENERGY LIMITED [36.0, 5.7%]	UK UTILITY RESERVE LIMITED [100.0, 2.6%]
5	HC ESS4 LIMITED [49.0, 4.3%]	DCP 179 DEEMED CAPACITY [38.4, 3.7%]	WIND PROSPECT [35.0, 5.5%]	SALTHOLME GAS [99.9, 2.6%]
Total	**[519.3, 45.9%]**	**[245.9, 24.0%]**	**[271.9, 43.0%]**	**[697.9, 17.9%]**

The top 5 players in battery storage took 45.9% of the market with more than 519MW capacity. About 246MW photovoltaic capacity were connected by the top 5 players with 24% market share. 43% of the onshore wind market was taken by the top 5 players, holding 272MW capacity.

Top Players by Year

The market share of the top 5 players was more than doubled from 2018 to 2022

Table 5-2: Top players of connected offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	CENTRICA [98.5, 6.9%]	FERRYBRIDGE MULTI-FUEL [77.0, 9.0%]	CONRAD [78.3, 10.4%]	SALTHOLME GAS [99.9, 12.5%]	MINETY SOUTH STORAGE EXPORT [110.7, 20.7%]
2	INNOGY [90.2, 6.3%]	BURN PARK FARM ENERGY STORAGE [49.9, 5.8%]	SOUTH STAFFS WATER COMPANY [75.2, 10.0%]	CONRAD [52.1, 6.5%]	COVANTA ENERGY LIMITED [48.6, 9.1%]
3	UK UTILITY RESERVE LIMITED [60.0, 4.2%]	HC ESS4 LIMITED [49.0, 5.7%]	COVANTA ROOKERY [66.4, 8.8%]	AURA POWER [49.9, 6.2%]	EEB [45.6, 8.5%]
4	MERCIA POWER [59.5, 4.1%]	VIRIDOR [44.4, 5.2%]	LONDON POWER ASSOCIATES LTD [65.0,	WORSET LANE GENERATION [49.9,	ARL [39.0, 7.3%]
5	BURN PARK FARM GAS UNITS [49.9, 3.5%]	UK UTILITY RESERVE LIMITED [40.0, 4.7%]	GREENFIELDS (F) LIMITED [53.9, 7.2%]	WELSH POWER [48.0, 6.0%]	DCP 179 DEEMED CAPACITY [38.4, 7.2%]
Total	**[358.1, 25.0%]**	**[260.3, 30.4%]**	**[338.8, 45.0%]**	**[299.8, 37.5%]**	**[282.3, 52.8%]**

Table 5-2 indicates that the market share of the top 1 player kept rising from 6.9% taken to 20.7% from 2018 to 2022. Totally, the market share of top 5 players was more than doubled from 25% to 52.8% from 2018 to 2022.

Chapter 6. Accepted Offers at Individual DNO Level

This chapter presents a detailed analysis for accepted offers at individual DNO level.

Accepted Offers in Western Power Distribution (NGED)

- NGED, counting 38% of the total DNO market with 35.4GW accepted capacity, has experienced a boosting trend of accepted offers from 2019 to 2022. Its accepted offers have been dominated by photovoltaic and mainly connected with a voltage of 132kV.
- We saw a rising trend in the photovoltaic capacity since 2018 and in the battery storage capacity since 2020.
- Battery storage, photovoltaic and onshore wind are mainly to be connected to 132kV.
- The capacity being connected to 132kV has dominated the market in all years followed by 33kV.
- Bluestone Energy dominates the market in NGED in 2022 with more than 2,415MW capacity.

Accepted Offers by Year, Technology, Voltage and Top Players

Figure 6-1 shows the analysis of the proportion of accepted capacity in NGED versus other DNOs and accepted capacity by year, technology, voltage and top players.

NGED vs Other DNOs: the total accepted capacity in NGED is around 35.4GW taking 38% of the total market versus a total of approximately 58.6GW in other DNOs.

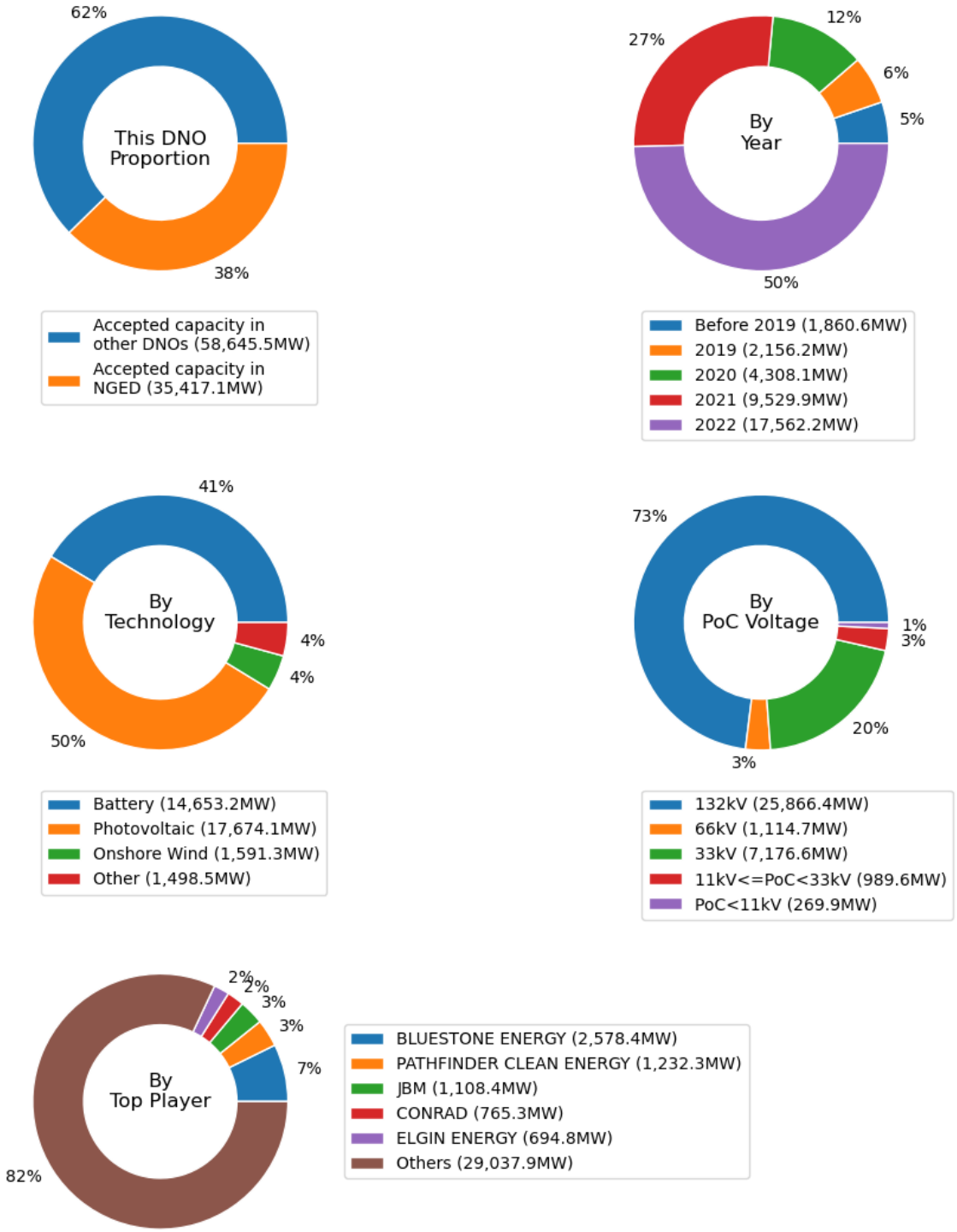
Accepted capacity by year: the market has been boosting from 2.2GW, 6% market share in 2019 to nearly 17.6GW, 50% in 2022.

Accepted capacity by technology: accepted offers utilising photovoltaic technology leads the market in NGED with nearly 17.7GW capacity and taking 50% of the market share. Battery storage takes 41% of the market share by about 14.7GW capacity. Onshore wind counts 4% of the market share by around 1.6GW capacity.

Accepted capacity by PoC voltage: most of the offers will be connected to 132kV with 25.9GW capacity and 73% market share, followed by 33kV with 7.2GW capacity and 20% market share. 66kV shares 3% of the total capacity by 1.1GW.

Top Players: Bluestone Energy leads the market in NGED with about 2.6GW accepted offers taking 7% market share, followed by Pathfinder Clean Energy with 1,232MW, 3%. Another 3% of the market is shared by JBM with 1108.4MW followed by Conrad with 765.3MW and Elgin Energy with 694.8MW counting a market share of 2%, respectively.

Figure 6-1: Accepted Capacity by Year, Technology, Voltage and Top Players



Technology by Year: Photovoltaic and Battery Storage Dominate the Market

Figure 6-2: Yearly accepted offers of various technologies since 2018

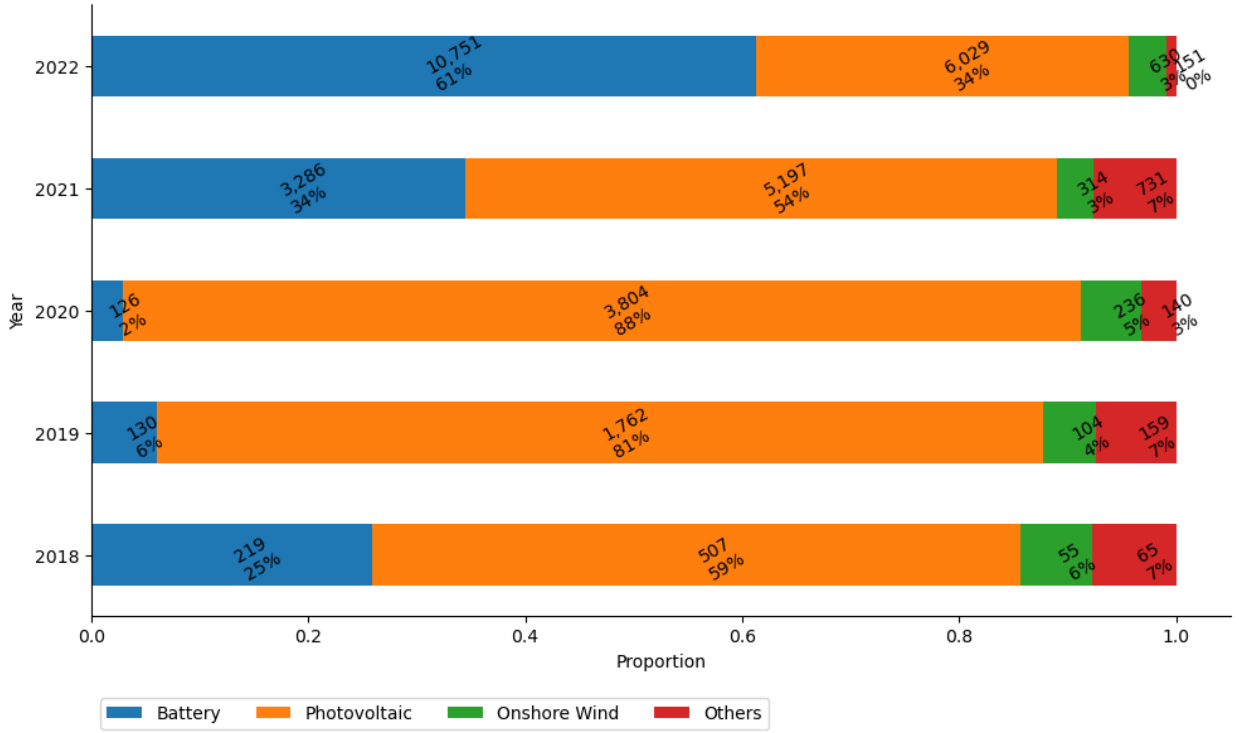


Figure 6-2 shows the yearly accepted capacity and market proportion for various technologies since 2018 in NGED. Photovoltaic has experienced a fast expansion from 2018 with capacity increasing from 507MW to about 6GW in 2022. The market share of photovoltaic capacity peaked in 2020 with 88% and dropped to 34% in 2022 due to the boosting of battery storage. The battery storage capacity fell from 219MW, 25% market share in 2018 to 126MW, 2% market share in 2020, then dramatically increased to nearly 3.3GW, 34% market share and 10.8GW with 61% market share in 2022.

PoC Voltage by Technology: 132kV Leads the Connections of Battery Storage and Photovoltaic

We show the capacity at various PoC voltage levels of accepted offers for different technologies in **Figure 6-3**. 12.6GW battery storage capacity and 11.9GW photovoltaic capacity will be connected to 132kV in NGED counting 85% and 67% of their total capacities, respectively. 872MW onshore wind will be connected to 132kV with a market share of 54% followed by the 465MW capacity that will be connected to 33kV counting 29% market share. In terms of other technologies, 555MW be connected to 132kV counting 37% of the market share followed by 556MW to 33kV taking 37% market share.

Figure 6-3: PoC voltage of accepted offers by technology

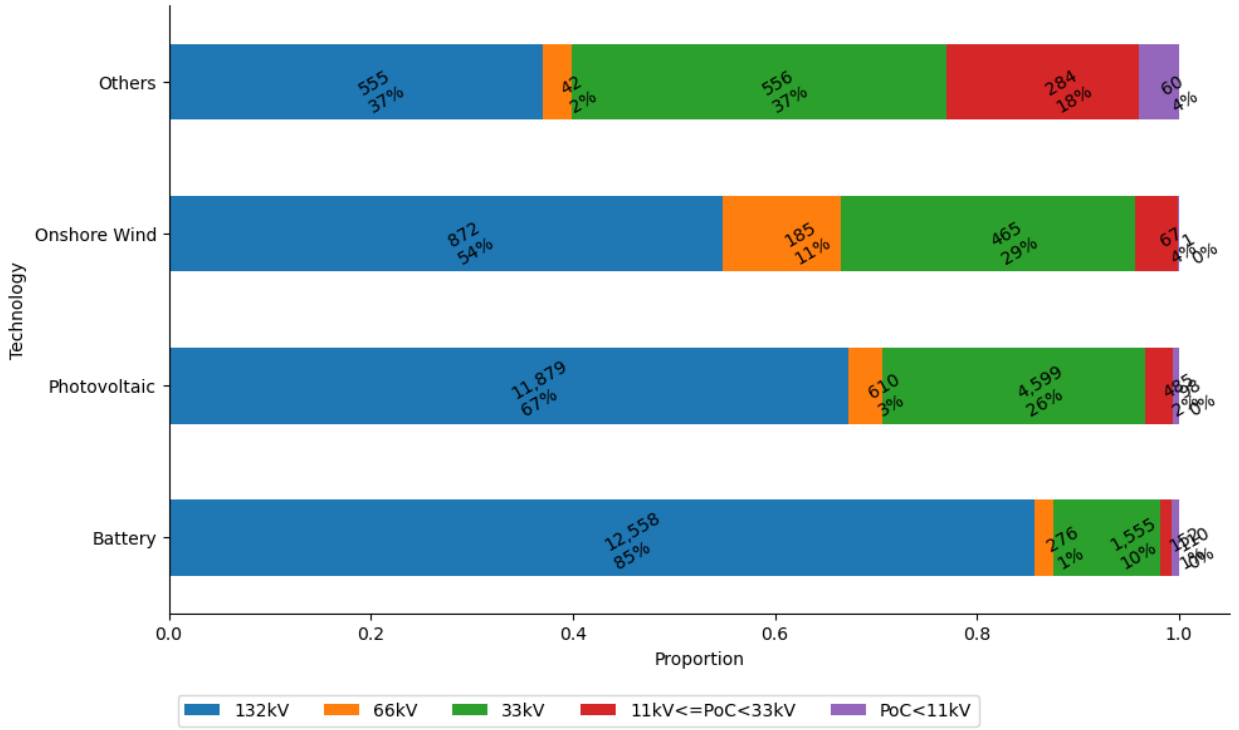
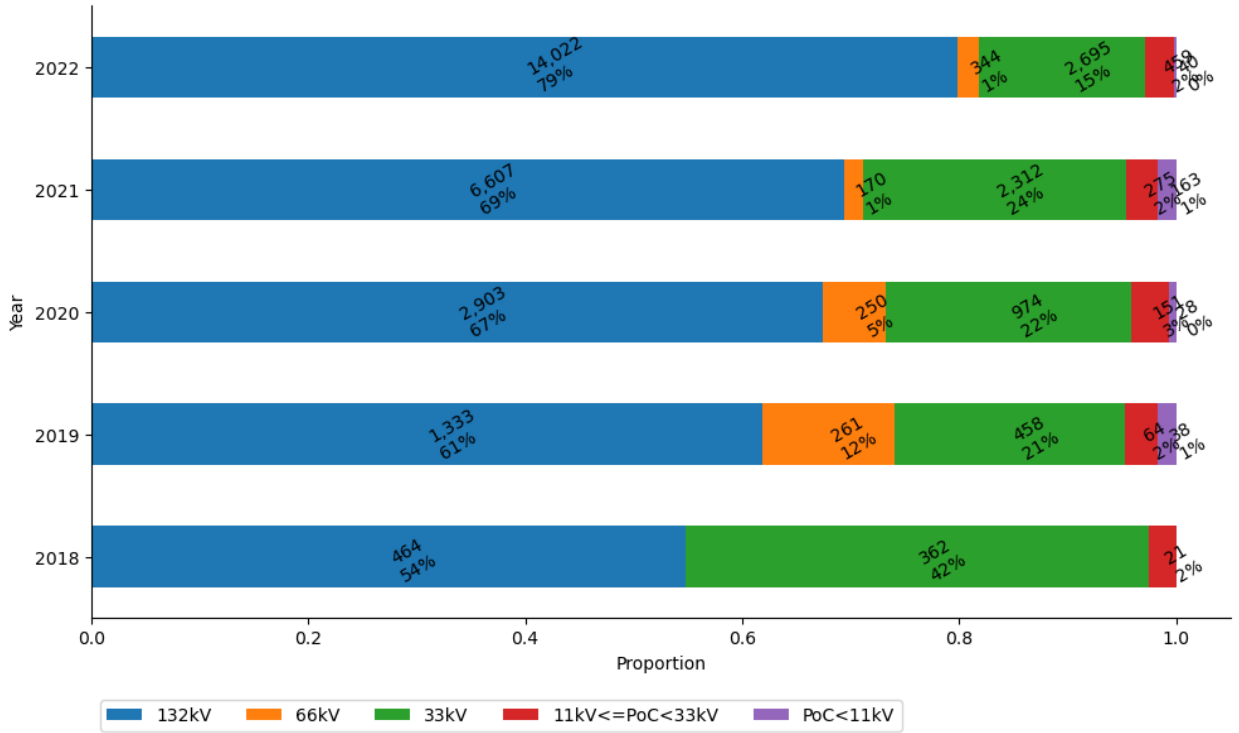


Figure 6-4: PoC voltage of accepted offers by year



PoC Voltage by Year: 132kV Dominates the Connections in All Years Followed by 33kV

Figure 6-4 shows the capacity and market share for different PoC voltage levels of accepted offers by year since 2018. The capacity connected to 132kV has increased from 464MW with 54% market share to 14GW, 79% market share in 2022. The capacity connected to 33kV has also seen a growth from 362MW in 2018 to 2.7GW in 2022, although its market share has decreased from 42% in 2018 to 15% in 2022.

Top Players in Each Technology Area

Bluestone Energy leads battery storage, Pathfinder Clean Energy dominates photovoltaic and CENIN leads onshore wind

Table 6-1 presents the top 5 players in each technology area with their accepted capacity (MW) and market share. Bluestone Energy leads the battery storage market with 1,938MW capacity counting 13.2% of the battery storage market. Pathfinder Clean Energy holds 1,094.2MW photovoltaic offers with 6.2% market share, ranking at the top in the photovoltaic market. CENIN is the largest player (20.9% market share) in the area of onshore wind technology with 332.9MW accepted capacity.

Table 6-1: Top players of accepted offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [1,938.0, 13.2%]	PATHFINDER CLEAN ENERGY [1,094.2, 6.2%]	CENIN [332.9, 20.9%]	NATURAL POWER [140.0, 9.3%]
2	IMMERSA [586.5, 4.0%]	JBM [973.6, 5.5%]	WIND 2 LTD [245.0, 15.4%]	GREEN FROG [66.4, 4.4%]
3	CONRAD [582.6, 4.0%]	LOG 2 LIMITED [680.0, 3.8%]	PENNANT WALTERS [162.1, 10.2%]	PULSE CLEAN ENERGY UK LTD [66.2, 4.4%]
4	BALANCE POWER [466.8, 3.2%]	EEB [661.0, 3.7%]	WELSH GOVERNMENT [121.2, 7.6%]	CONRAD [62.4, 4.2%]
5	FPC ELECTRIC LAND [455.0, 3.1%]	BLUESTONE ENERGY [640.4, 3.6%]	ECOTRICITY [108.0, 6.8%]	BH ENERGY GAP (WALSALL LIMITED) [50.0, 3.3%]
Total	**[4,028.9, 27.5%]**	**[4,049.2, 22.9%]**	**[969.2, 60.9%]**	**[385.0, 25.7%]**

The top 5 players in battery storage take approximately 27.5% of the market with about 4GW accepted capacity. Approximately 4GW photovoltaic offers are held by the top 5 players counting 22.9% market share. The top 5 players in onshore wind sites hold more than 969.2MW capacity with 60.9% market share.

Top Players by Year

Bluestone Energy dominates the market in 2022 as a rising star

Table 6-2 shows the top players of accepted capacity in each year since 2018. EEB was the top player with 125MW. JBM ranked top from 2019 to 2021 with 197.7 MW (9.2% market share) in 2019, 319.5MW (7.4%) in 2020 and 344.5MW (3.6%) in 2021. Bluestone Energy is a rising star in 2022 holding 2,415.4MW capacity with 13.8% market share.

Totally, the market share of the top 5 players has decreased from 57.7% in 2018 to 30% in 2022 although the capacity has increased from nearly 490MW to about 5.3GW in the same period, meaning that other developers has been sharing more capacity over years in the market of NGED.

Table 6-2: Top players of accepted offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	EEB [125.0, 14.7%]	JBM [197.7, 9.2%]	JBM [319.5, 7.4%]	JBM [344.5, 3.6%]	BLUESTONE ENERGY [2,415.4, 13.8%]
2	JBM [84.9, 10.0%]	EEB [190.0, 8.8%]	SOLAR CENTURY [246.4, 5.7%]	INNOVA [303.5, 3.2%]	PATHFINDER CLEAN ENERGY [1,182.5, 6.7%]
3	AURA POWER [80.0, 9.4%]	LIGHTSOURCE [183.5, 8.5%]	AURA POWER [199.6, 4.6%]	ANGLO [299.1, 3.1%]	LOG 2 LIMITED [680.0, 3.9%]
4	ENDERBY STORAGE LIMITED; NEWTONWOOD ENERGY	CENIN [103.4, 4.8%]	EDF [179.8, 4.2%]	CELLARHEAD BESS LIMITED; EXAGEN DEVELOPMENT	IMMERSA [497.0, 2.8%]
5	RUSH WALL SOLAR PARK LIMITED [50.0, 5.9%]	PERIDOT SOLAR (GRIDCO) LIMITED [100.0, 4.6%]	ELGIN ENERGY [130.0, 3.0%]	BALANCE POWER [228.4, 2.4%]	CONRAD [497.0, 2.8%]
Total	**[489.9, 57.7%]**	**[774.6, 35.9%]**	**[1,075.3, 25.0%]**	**[1,735.5, 18.2%]**	**[5,271.9, 30.0%]**

Accepted Offers in Scottish and Southern Electricity Networks (SSE)

- SSE, counting 19% of the total DNO market with 17.9GW accepted capacity, has experienced a rising trend of accepted offers since 2019 dominated by battery storage and mainly connected to a voltage of 33kV and below.
- We saw a rising trend of battery storage capacity since 2018 followed by photovoltaic and onshore wind, but a dramatic decrease of the capacity from other technologies.
- Battery storage and photovoltaic are mainly to be connected to voltage levels between 11kV (incl.) and 33kV (excl.), whilst onshore wind mainly on 33kV.
- The capacity connected to 33kV has been falling whilst the capacity connected to the voltages below 33kV has been rising since 2018.
- DNO Consulting was the market dominator with 2 of 5 years ranking at the top, holding offers focusing on photovoltaic and "other" technologies.

Accepted Offers by Year, Technology, Voltage and Top Players

Figure 6-5 shows the analysis of the proportion of accepted capacity in SSE versus other DNOs and accepted capacity by year, technology, voltage and top players.

SSE vs Other DNOs: the total accepted capacity in SSE is around 17.9GW taking 19% of the market versus a total of approximately 76GW in other DNOs.

Accepted capacity by year: the market has been rising from 1.4GW, 8% market share in 2019 to 2.3GW, 13% in 2020 then to 3.8GW, 21% in 2021 and 8.1GW, 45% in 2022.

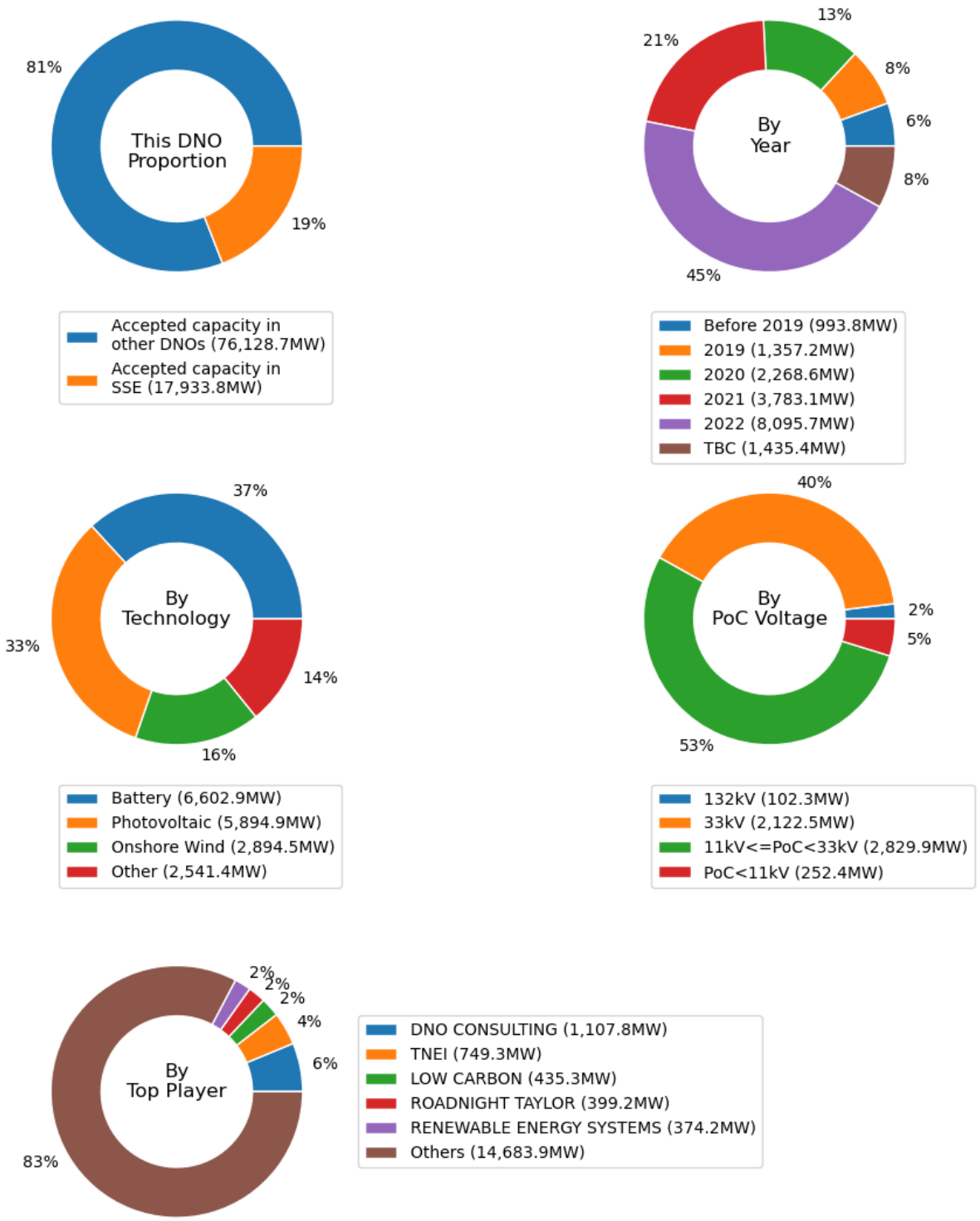
Accepted capacity by technology: accepted offers utilising battery storage technology leads the market in SSE with about 6.6GW capacity and takes 37% of the market share. Photovoltaic takes 33% of the market share by about 5.9GW capacity followed by the 16% market shared by onshore wind with nearly 2.9GW capacity.

Accepted capacity by PoC voltage: most of the offers will be connected to a voltage level of 33kV and below. 33kV will connect 40% of the offers with approximately 2.1GW. 53% of the offers, that is more than 2.8GW capacity, will be connected to a voltage level between 11kV (incl.) and 33kV (excl.). The rest of the offers will be mainly connected to a voltage level that is below 11kV and only 102.3MW will be connected to 132kV.

Top Players: DNO Consulting leads the market in SSE by 1,107.8MW accepted offers taking 6% market share, followed by TNEI with 749.3MW, 4%. The other

three top players hold accepted offers around 400MW sharing about 2% of the market each.

Figure 6-5: Accepted Capacity by Year, Technology, Voltage and Top Players



Technology by Year: Photovoltaic and Battery Storage Leading the Market

Figure 6-6: Yearly accepted offers of various technologies since 2018

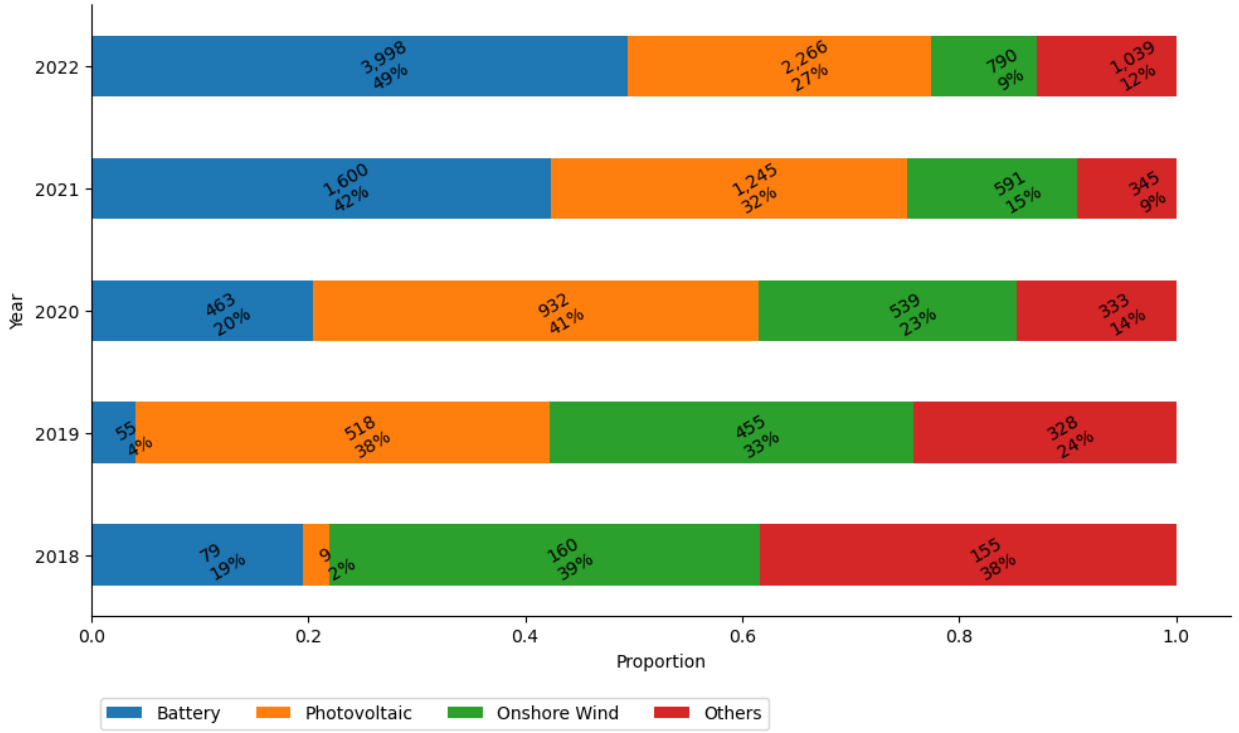


Figure 6-6 shows the yearly accepted capacity and market proportion for various technologies since 2018 in SSE. Photovoltaic has experienced a fast expansion from 2018 to 2022, with capacity increasing from 9MW to more than 2.2GW and market share growing from 2% to 27%. Battery storage capacity has been rising since 2019 to 2022, with market share increased from 4% in 2019 to 49% in 2022. Onshore wind has seen a continuous increase in accepted capacity from 160MW in 2018 to 790MW in 2022, however, its market share dropped from 39% in 2018 to only 9% in 2022.

PoC Voltage by Technology: Battery and Photovoltaic on Voltage Levels Between 11kV (incl.) and 33kV (excl.), Onshore Wind on 33kV

We show the capacity at various PoC voltage levels of accepted offers for different technologies in SSE in Figure 6-7. SSE mainly accepted offers with a PoC voltage with 33kV and below. Most battery storage and photovoltaic systems will be connected to voltage levels between 11kV (incl.) and 33kV (excl.) with around 698MW battery storage capacity and 1.7GW photovoltaic capacity. Whilst, most of the onshore wind offers, more than 1.2GW, will be connected to 33kV counting 96% of the total onshore wind capacity.

Figure 6-7: PoC voltage of accepted offers by technology

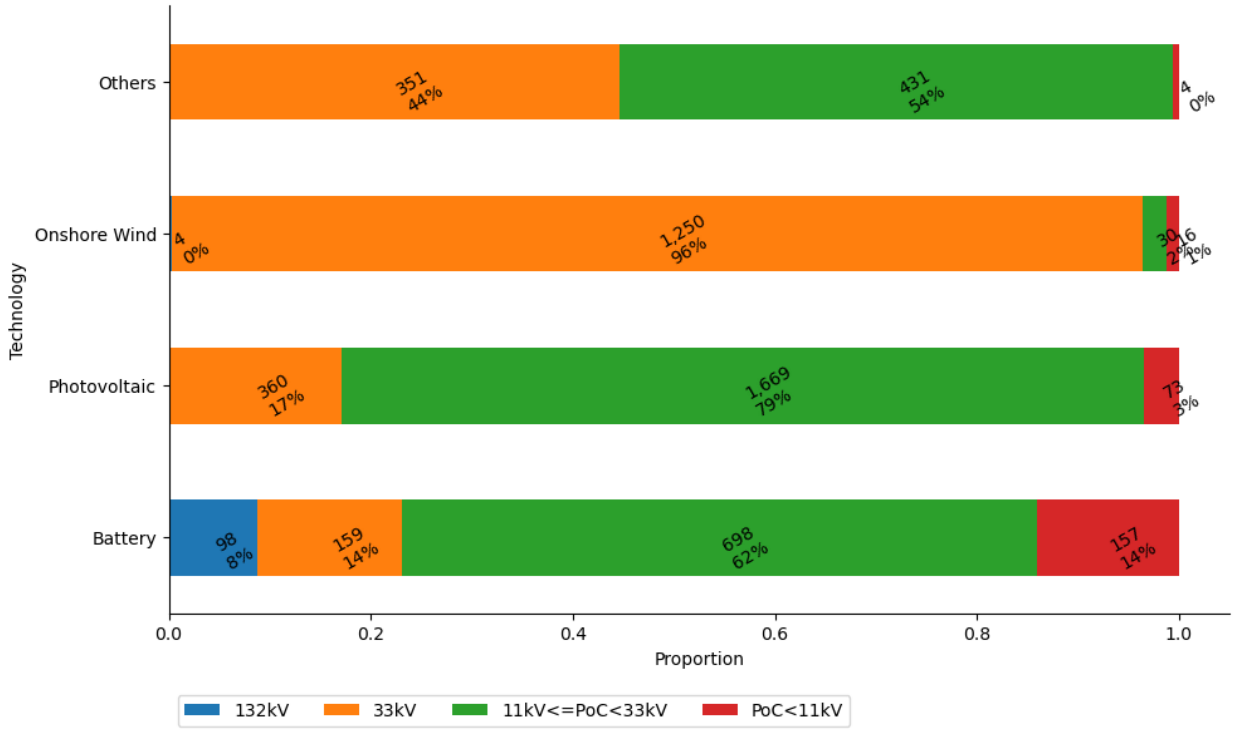
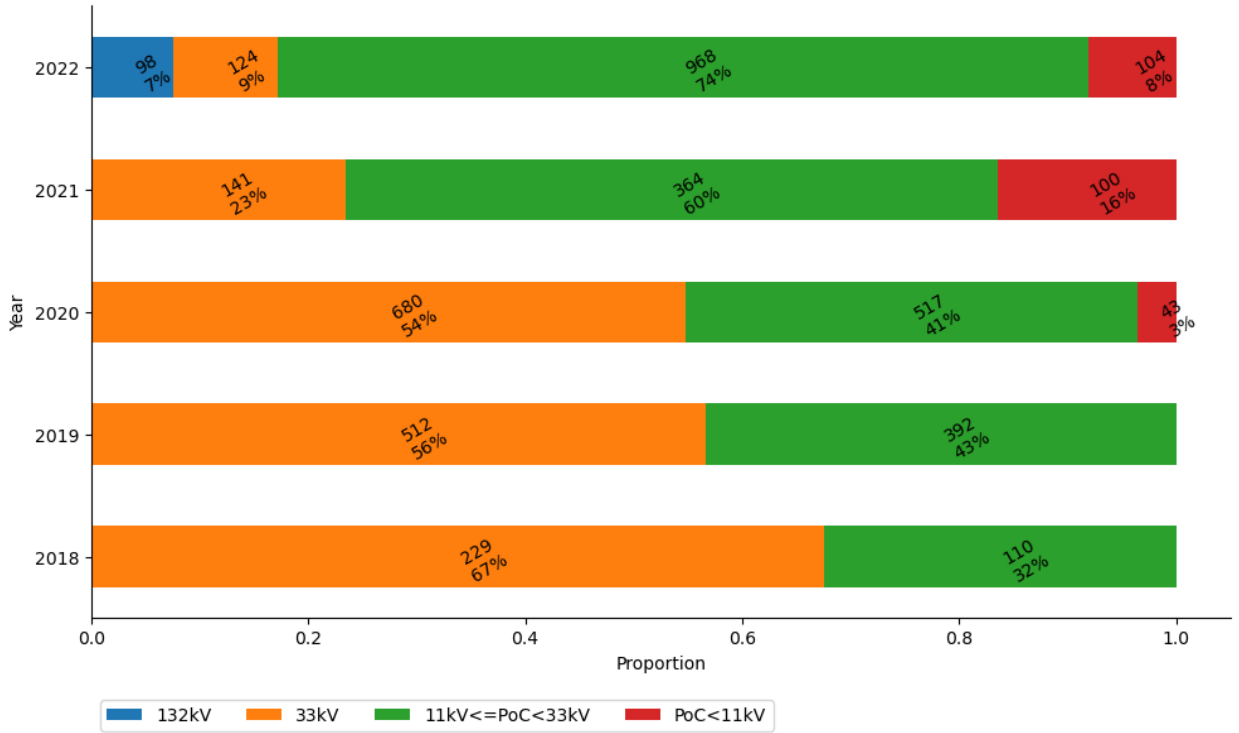


Figure 6-8: PoC voltage of accepted offers by year



PoC Voltage by Year: 33kV Falling and Voltage Levels Below 33kV Rising

Figure 6-8 shows the capacity and market share for different PoC voltage levels of accepted offers by year since 2018. 33kV has peaked in 2020 with 680MW and 54% market share followed by a drop in 2021 to 141MW, 23% and 124MW, 9% in 2022. The capacity to be connected to voltage levels between 11kV (incl.) and 33kV(excl.) had been rising since 2018 to 2022 from 110MW, 32% market share to 968MW, 74% market share. Other voltage levels that are below 11kV has started to see accept offers since 2020 with 43MW, 3% market share, 100MW, 16% in 2021 and 104MW, 8% in 2022.

Top Players in Each Technology Area

Narec Distributed Energy leads battery storage, DNO Consulting dominates photovoltaic and TNEI leads onshore wind

Table 6-3 presents the top 5 players in each technology area with their accepted capacity (MW) and market share. Narec Distributed Energy leads the battery storage market with nearly 250MW capacity counting 3.9% of the battery storage market. DNO Consulting holds 725.9MW photovoltaic offers with 12.4% market share. TNEI is the largest player (18.3% market share) in the area of onshore wind technology with 525.6MW accepted capacity. DNO Consulting is also the leader in “other” technology area with approximately 3.1MW capacity and 11.9% market share.

Table 6-3: Top players of accepted offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	NAREC DISTRIBUTED ENERGY [249.6, 3.9%]	DNO CONSULTING [725.9, 12.4%]	TNEI [525.6, 18.3%]	DNO CONSULTING [301.3, 11.9%]
2	BLUESTONE ENERGY [248.0, 3.8%]	LOW CARBON [435.3, 7.4%]	RENEWABLE ENERGY SYSTEMS [185.5, 6.5%]	SWECO [154.6, 6.1%]
3	BALANCED GRID SOLUTIONS [232.0, 3.6%]	SOLAR 2 [218.7, 3.7%]	WIND 2 LTD [177.0, 6.2%]	SSE [124.0, 4.9%]
4	OPDE UK LTD [210.7, 3.3%]	ROADNIGHT TAYLOR [179.7, 3.1%]	NATURAL POWER [163.9, 5.7%]	MERAKI CONSULTANTS LIMITED [94.9, 3.7%]
5	AB ENERGY AGENCY [200.0, 3.1%]	PUBLIC POWER SOLUTIONS [170.0, 2.9%]	EVANS ENERGY [150.0, 5.2%]	ANESCO [72.6, 2.9%]
Total	**[1,140.3, 17.6%]**	**[1,729.6, 29.5%]**	**[1,202.1, 41.9%]**	**[747.4, 29.4%]**

The top 5 players in battery storage take approximately 17.6% of the market with about 1.1GW accepted capacity. Approximately 1.7GW photovoltaic offers are held by the top 5 players counting 29.5% market share. Approximately 1.2GW capacity of the onshore wind market is controlled by the top 5 players with 41.9% market share.

Top Players by Year

DNO Consulting Dominated the Market in 2 of the 5 years

Table 6-4: Top players of accepted offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	ORKNEY ISLANDS COUNCIL [73.5, 18.9%]	DNO CONSULTING [177.6, 13.2%]	LOW CARBON [150.5, 6.7%]	AVON [299.9, 8.0%]	DNO CONSULTING [456.1, 5.7%]
2	WHEELABRATOR TECHNOLOGIES (UK)	TNEI [120.2, 8.9%]	DNO CONSULTING [137.8, 6.1%]	TNEI [218.7, 5.8%]	CONRAD [298.1, 3.7%]
3	CAPBAL [40.0, 10.3%]	BSR [80.0, 5.9%]	RE PROJECTS DEVELOPMENT LIMITED [123.0, 5.5%]	SPE ELECTRICAL [200.0, 5.3%]	GEW2 LTD [293.4, 3.7%]
4	AQUATERA LTD; NORTHWIND ASSOCIATED LIMITED [30.0, 7.7%]	VATTENFALL [77.0, 5.7%]	TNEI [118.8, 5.3%]	RENEWABLE ENERGY SYSTEMS [179.7, 4.8%]	TNEI [272.1, 3.4%]
5	FORSA [22.5, 5.8%]	LOW CARBON [65.0, 4.8%]	PENSO POWER LIMITED [110.0, 4.9%]	BLUESTONE ENERGY [150.0, 4.0%]	OPDE UK LTD [263.4, 3.3%]
Total	**[261.3, 67.1%]**	**[519.8, 38.5%]**	**[640.1, 28.5%]**	**[1,048.3, 27.9%]**	**[1,583.1, 19.8%]**

Table 6-4 shows the top players of accepted capacity in each year since 2018. DNO Consulting dominated the market in 2019 with 177.6MW capacity and 13.2% market share, in 2022 with 456.1MW and 5.7% market share. Low Carbon surpassed DNO Consulting in 2020 with 150.5MW capacity and 6.7% market share. Avon was the largest player in 2021 with nearly 300MW capacity and 8.0% market share.

Totally, the market share of the top 5 players have decreased from 67.1% in 2018 to only 19.8% in 2022, meaning that other developers are playing more important roles in the market of SSE.

Accepted Offers in UK Power Networks (UKPN)

- UKPN, counting 15% of the total DNO market with 14.4GW accepted capacity, has experienced a rising trend of accepted offers from 2019 to 2022. Its accepted offers are dominated by battery storage and photovoltaic and mainly connected with a voltage of 132kV.
- We saw a rising trend of battery storage and photovoltaic capacity since 2018, but dramatic decrease of the capacity with other technologies.
- Battery storage and photovoltaic are mainly to be connected to 132kV, whilst onshore wind on voltage levels between 11kV (incl.) and 33kV (incl.).
- The capacity connected to 132kV has dominated the market in all years followed by 33kV.
- Bluestone Energy is the market dominator in battery storage technology and becomes the market leader in UKPN in 2022.

Accepted Offers by Year, Technology, Voltage and Top Players

Figure 6-9 shows the analysis of the proportion of accepted capacity in UKPN versus other DNOs and accepted capacity by year, technology, voltage and top players.

UKPN vs Other DNOs: the total accepted capacity in UKPN is around 14.4GW taking 15% of the total market versus a total of approximately 79.6GW in other DNOs.

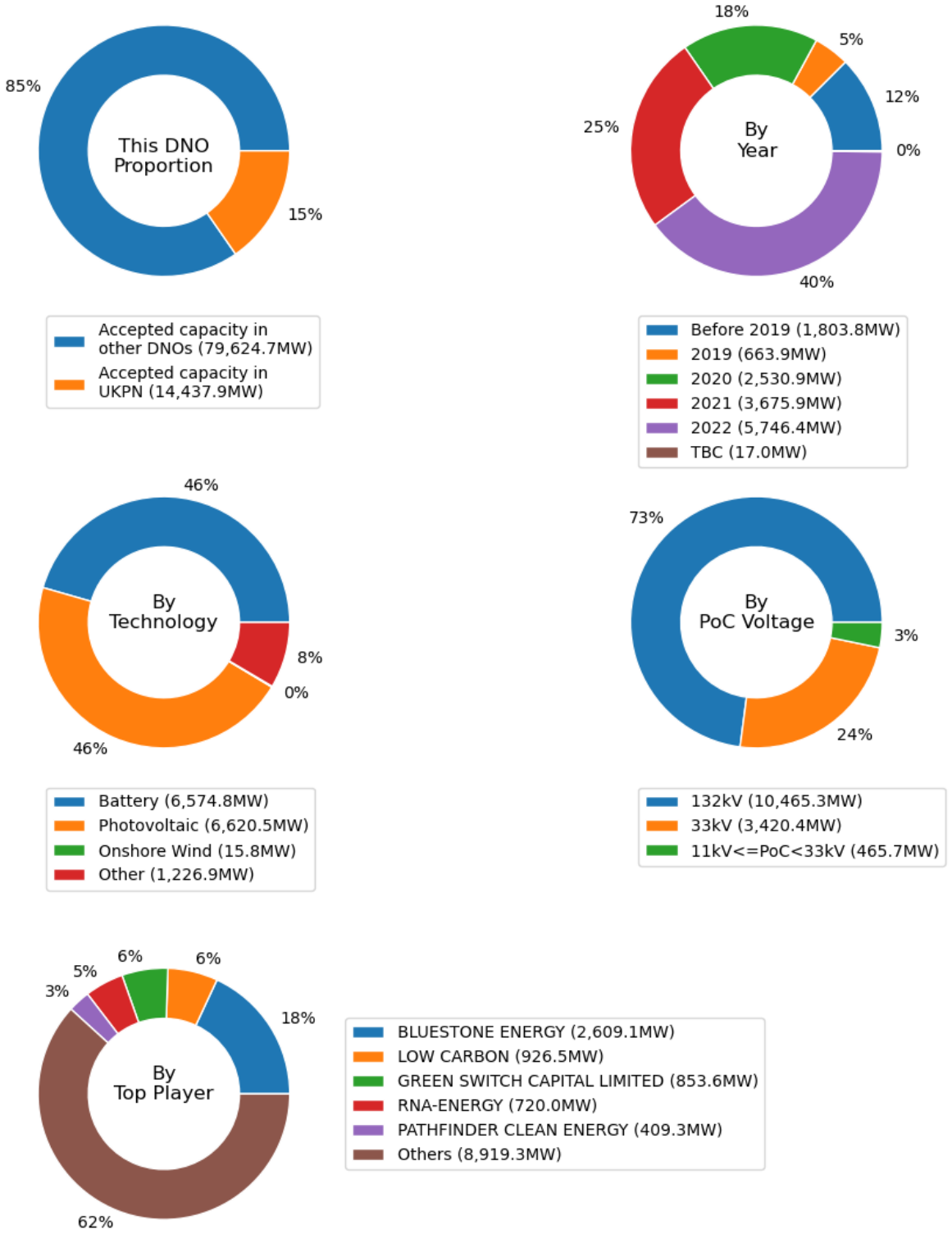
Accepted capacity by year: the market has been rising from 664MW, 5% market share in 2019 to about 5.7GW, 40% market share in 2022.

Accepted capacity by technology: accepted offers utilising battery storage and photovoltaic technology lead the market in UKPN with around 6.6GW capacity and taking 46% of the market share, respectively. 8% market is shared by “other” technologies with approximately 1.2GW capacity.

Accepted capacity by PoC voltage: most of the offers will be connected to 132kV with 10.5GW capacity and 73% market share, followed by 33kV with 3.4GW capacity and 24% market share. The rest of the offers, that is 465.7MW, will be connected to a voltage level between 11kV (incl.) and 33kV (excl.).

Top Players: Bluestone Energy leads the market in UKPN with 2,609.1MW accepted offers taking 18% market share, followed by Low Carbon with 926.5MW, 6%. Green Switch Capital holds 853.6MW capacity sharing 6% of the market, followed by RNA-Energy with 720MW and 5%. Pathfinder Clean Energy is the fifth largest developer in UKPN with 409.3MW capacity and 3% market share.

Figure 6-9: Accepted Capacity by Year, Technology, Voltage and Top Players



Technology by Year: Battery Storage and Photovoltaic Boiling, Dominating the Market

Figure 6-10: Yearly accepted offers of various technologies since 2018

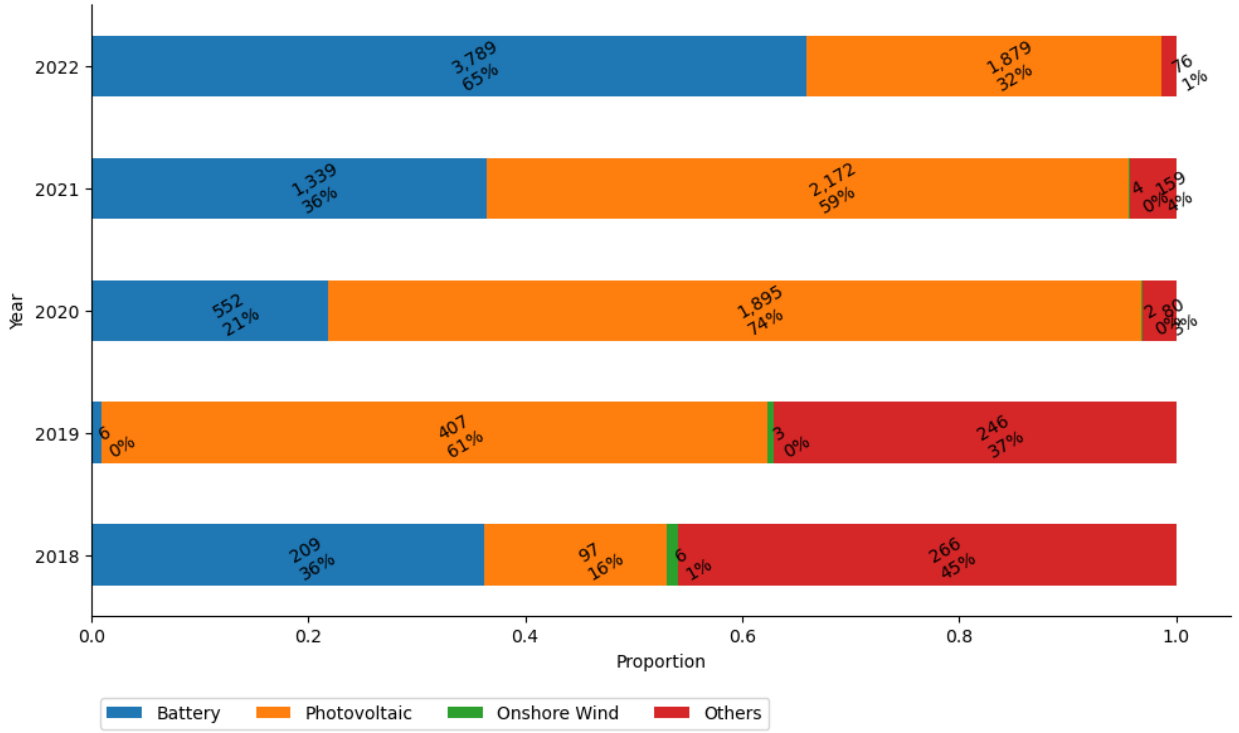


Figure 6-10 shows the yearly accepted capacity and market proportion for various technologies since 2018 in UKPN. Battery storage and Photovoltaic technologies have dominated the market. Battery storage has experienced a fast expansion from 2019 to 2022, with capacity increasing from only 6MW to about 3.8GW and market share growing from nearly 0% to 65%. The capacity of photovoltaic has grown from 97MW in 2018 to 2,172MW in 2021 and dropped to 1,879MW in 2022 sharing 32% of the market in 2022. Onshore wind technology has always been a minor player in the market and other technologies have seen a down trend since 2018.

PoC Voltage by Technology: 132kV Leads the Connections of Battery Storage and Photovoltaic

We show the capacity at various PoC voltage levels of accepted offers for different technologies in Figure 6-11. More than 6GW battery storage capacity and over 3.7GW photovoltaic capacity will be connected to 132kV in UKPN counting 93% and 56% of their total capacities, respectively. 6MW onshore wind will be connected to 33kV just behind the 9MW capacity that will be connected to a voltage level between 11kV (incl.) and 33kV (excl.). In terms of other technologies, 621MW is to be connected to 132kV counting 52% followed by 267MW to 33kV and 301MW to a voltage level between 11kV (incl.) and 33kV (excl.).

Figure 6-11: PoC voltage of accepted offers by technology

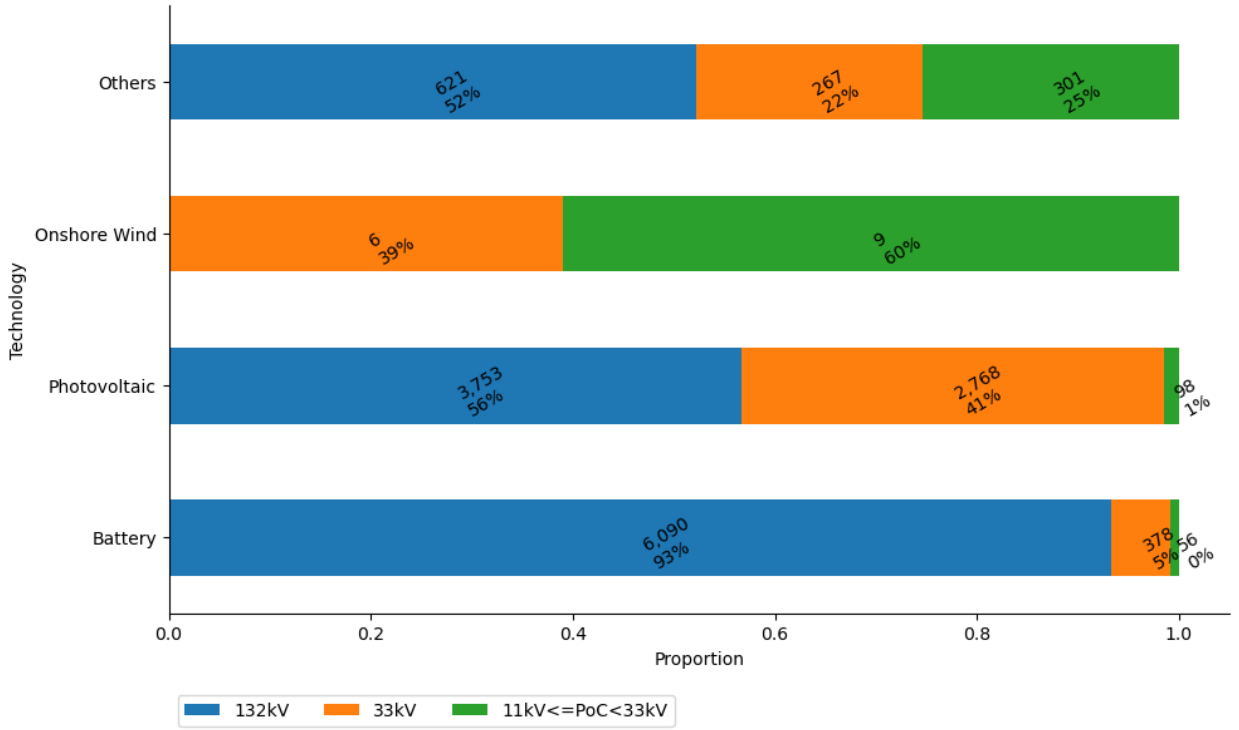
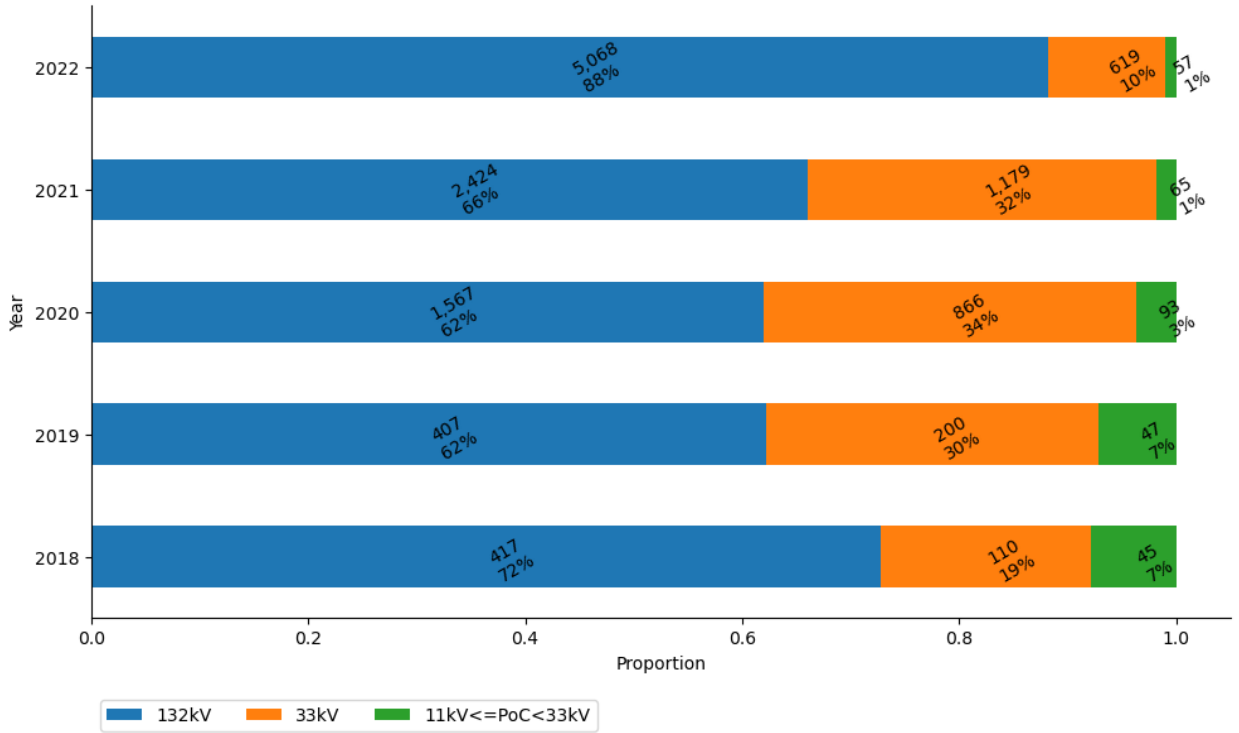


Figure 6-12: PoC voltage of accepted offers by year



PoC Voltage by Year: 132kV Dominates the Connections in All Years Followed by 33kV

Figure 6-12 shows the capacity and market share for different PoC voltage levels of accepted offers by year since 2018. 132kV has always played a significant role counting more than 60% market share in all years since 2018 to 2022 along with an increase of capacity from 417MW to nearly 5.1GW. 33kV also takes a material position in UKPN's connection with market share rising from 19% in 2018 to 32% in 2021 and fell to 10% in 2022.

Top Players in Each Technology Area

Bluestone Energy leads battery storage, Low Carbon dominates photovoltaic and TCI Renewables leads onshore wind

Table 6-5 presents the top 5 players in each technology area with their accepted capacity (MW) and market share. Bluestone Energy leads the battery storage market with more than 2,361MW capacity counting 35.9% of the battery storage market. Low Carbon holds 921.5MW photovoltaic offers with 13.9% market share. TCI Renewables is the largest player (39% market share) in the area of onshore wind technology with 6.2MW accepted capacity.

Table 6-5: Top players of accepted offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [2,361.1, 35.9%]	LOW CARBON [921.5, 13.9%]	TCI RENEWABLES LIMITED [6.2, 39.0%]	FICHTNER CONSULTING ENGINEERS LTD [110.0, 9.0%]
2	GREEN SWITCH CAPITAL LIMITED [696.0, 10.6%]	RNA-ENERGY [516.8, 7.8%]	CERTUS UTILITY [4.1, 26.0%]	DNO CONSULTING [99.9, 8.1%]
3	RNA-ENERGY [203.2, 3.1%]	PATHFINDER CLEAN ENERGY [409.3, 6.2%]	MJS GRID SERVICES LTD [3.5, 22.2%]	CONRAD [93.0, 7.6%]
4	BALANCED GRID SOLUTIONS [200.3, 3.0%]	ROADNIGHT TAYLOR [333.6, 5.0%]	NTL WORLD [2.0, 12.7%]	MVV UMWELT GMBH [62.0, 5.1%]
5	SANDBROOK CAPITAL BES [200.0, 3.0%]	BLUESTONE ENERGY [248.0, 3.7%]	-	KNM ECO INNOVATIONS [52.0, 4.2%]
Total	**[3,660.6, 55.7%]**	**[2,429.2, 36.7%]**	**[15.8, 100.0%]**	**[416.9, 34.0%]**

The top 5 players in battery storage take approximately 55.7% of the market with about 3660.6MW accepted capacity. Approximately 2.4GW photovoltaic offers are held by the top 5 players counting 36.7% market share. All the 15.8MW onshore wind capacity is controlled by the top 4 players counting 39%, 26%, 22.2% and 12.7% market share, respectively.

Top Players by Year

Bluestone Energy becomes the new leader in UKPN

Table 6-6 shows the top players of accepted capacity in each year since 2018. Balanced Grid was the top player in 2018 with 98.9MW and 17.1 market share, caught up by DNO Consulting with nearly 150MW and 22.6% market share in 2019. Low Carbon led the accepted capacity in 2020 with nearly 330MW and 13%

market share. RNA-Energy took over the market leader in 2021 with 316MW capacity and 8.6% market share. Bluestone Energy has become the new leader in 2022 holding 2,443.1MW capacity and 42.5% market share.

Totally, the market share of the top 5 players decreased from 52.6% in 2018 to 28.1% in 2021 then increased to 69.7% due to the fast growth of Bluestone Energy.

Table 6-6: Top players of accepted offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	BALANCED GRID SOLUTIONS [98.9, 17.1%]	DNO CONSULTING [149.9, 22.6%]	LOW CARBON [329.8, 13.0%]	RNA-ENERGY [316.0, 8.6%]	BLUESTONE ENERGY [2,443.1, 42.5%]
2	ENSO ENERGY [57.6, 9.9%]	BSR [87.5, 13.2%]	PATHFINDER CLEAN ENERGY [206.5, 8.2%]	LOW CARBON [276.0, 7.5%]	GREEN SWITCH CAPITAL LIMITED [853.6, 14.9%]
3	SAVILLS [50.0, 8.6%]	MJS GRID SERVICES LTD [73.4, 11.1%]	SOLAR CENTURY [180.0, 7.1%]	CERTUS UTILITY [153.6, 4.2%]	LOW CARBON [284.0, 4.9%]
4	AXA INVESTMENT MANAGERS [49.5, 8.5%]	FICHTNER CONSULTING ENGINEERS LTD [55.0, 8.3%]	ANESCO [164.4, 6.5%]	SERRUYS PROPERTY COMPANY LTD [150.0, 4.1%]	ROADNIGHT TAYLOR [224.8, 3.9%]
5	MGMATRIX LTD [49.0, 8.5%]	ATON ENERGY [50.0, 7.5%]	RNA-ENERGY [125.1, 4.9%]	BLUESTONE ENERGY [138.0, 3.8%]	MOTT MAC [200.0, 3.5%]
Total	**[305.0, 52.6%]**	**[415.8, 62.6%]**	**[1,005.8, 39.7%]**	**[1,033.6, 28.1%]**	**[4,005.6, 69.7%]**

Accepted Offers in Northern Powergrid (NPG)

- NPG, counting 14% of the total DNO market with 13.2GW accepted capacity, has experienced a rising trend of accepted offers since 2019 dominated by photovoltaic and mainly connected with a PoC voltage of 132kV.
- We saw a rising trend of photovoltaic and battery storage capacity since 2018.
- Battery, photovoltaic and onshore wind offers have mostly been connected to 132kV. The connection capacity of 132kV has seen an uptrend since 2019.
- Bluestone Energy has become the market leader in battery storage market in 2022.

Accepted Offers by Year, Technology, Voltage and Top Players

Figure 6-13 shows the analysis of the proportion of accepted capacity in NPG versus other DNOs and accepted capacity by year, technology, voltage and top players.

NPG vs Other DNOs: the total accepted capacity of NPG is around 13.2GW taking 14% of the total market versus a total of approximately 80.9GW in other DNOs.

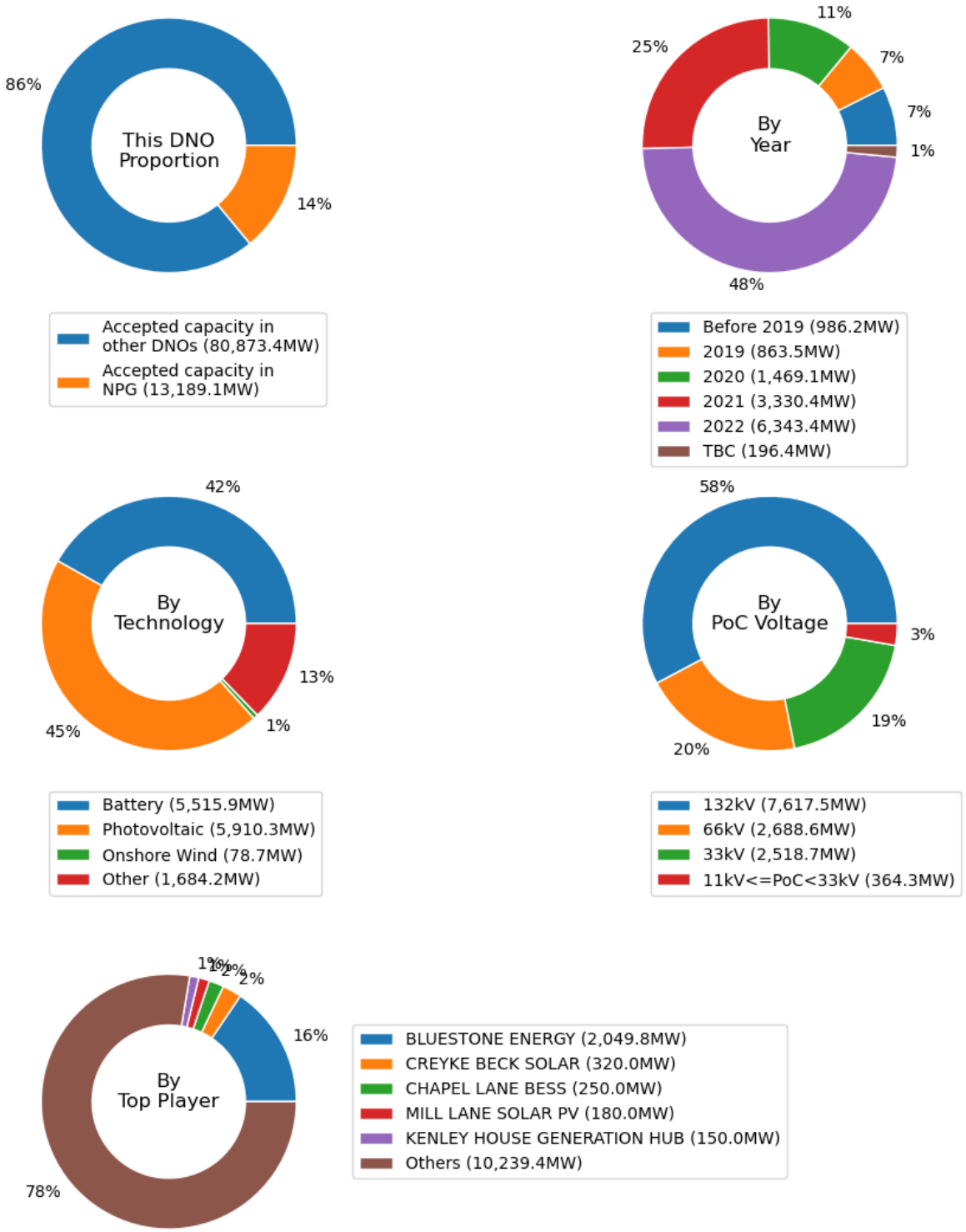
Accepted capacity by year: the market had been rising from 863.5MW, 7% market share in 2019 to 6.3GW, 48% in 2022.

Accepted capacity by technology: 45% of the accepted offers are utilising photovoltaic technology with more than 5.9GW capacity. Battery storage takes 42% of the market share with 5.5GW capacity followed by the 13% market shared by “other” technology with 1.7GW capacity. Onshore wind technology is not popular in NPG with only 78.7MW accepted capacity.

Accepted capacity by PoC voltage: more than half of the accepted offers, 7.6GW, will be connected on 132kV. 66kV and 33kV also play important roles counting 20% and 19% market share, respectively.

Top Players: Bluestone Energy leads the market in NPG with 2,049.8MW accepted offers taking 16% market share, followed by Creyke Beck Solar with 320MW, 2%. Chapel Lane Bess holds 250MW capacity with 2% market share followed by Mill Lane Solar PV and Kenley House Generation Hub with less than 200MW capacity, respectively.

Figure 6-13: Accepted Capacity by Year, Technology, Voltage and Top Players



Technology by Year: Photovoltaic Expanding with Battery Storage

Figure 6-14: Yearly accepted offers of various technologies since 2018

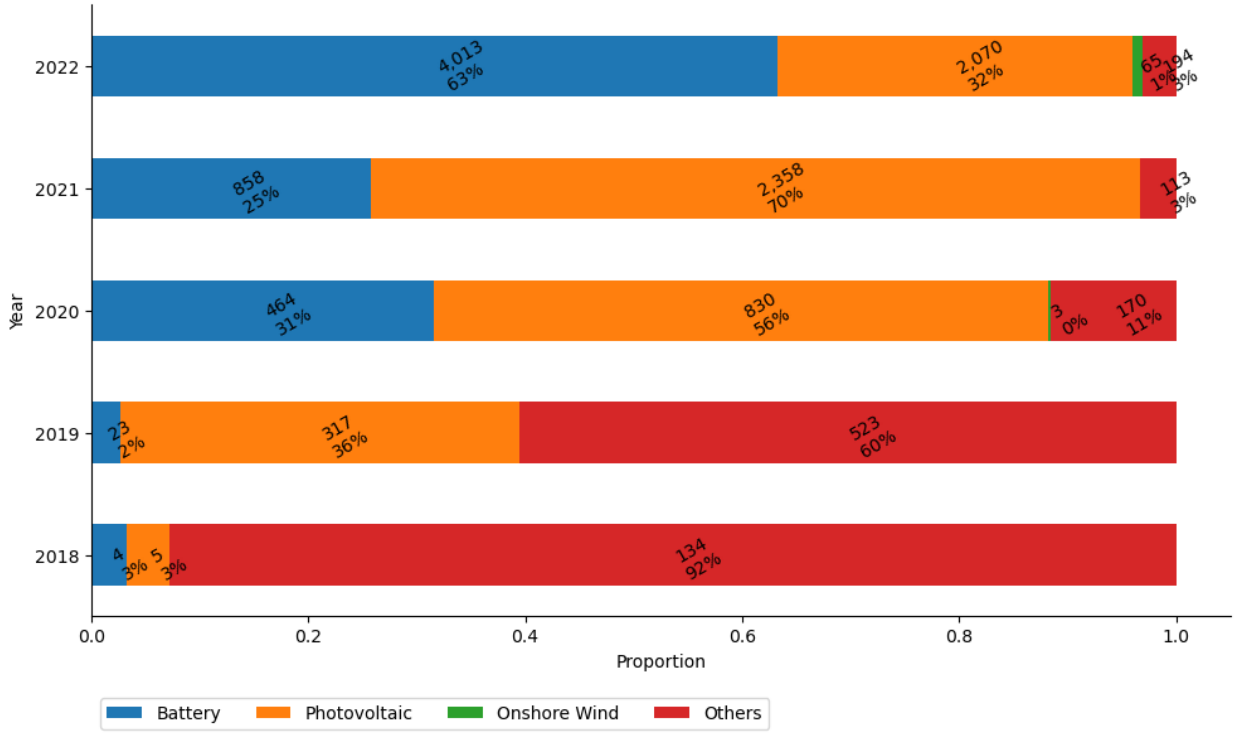


Figure 6-14 shows the yearly accepted capacity and market proportion for various technologies since 2018 in NPG. Photovoltaic had experienced a fast expansion from 2018 to 2022, with capacity increasing from 5MW to 2,070MW and market share growing from 3% to 32%. Battery storage capacity was low in 2018 (4MW) and 2019 (23MW), but had been rising from 2020 with 464MW and 31% market share to 2022 with 4,013MW and 63% market share. Contrast to the expansion in photovoltaic and battery storage capacity, the market share of "other" technologies had been falling fast from 92% to only 3% from 2018 to 2022.

PoC Voltage by Technology: Battery and Photovoltaic on 132kV, Onshore Wind on 11kV

We show the capacity at various PoC voltage levels of accepted offers for different technologies in NPG in **Figure 6-15**. The most popular connection voltage for battery storage system is 132kV which will digest 4,158MW capacity taking 75% of the total battery capacity, followed by 33kV with 722MW counting 13%. 132kV and 33kV are also the main PoC voltage levels for photovoltaic offers, with 2,825MW and 1,598MW connections counting 47% and 27% of the total photovoltaic capacity, respectively. Onshore wind capacity will be mainly connected to 132kV with 65MW capacity.

Figure 6-15: PoC voltage of accepted offers by technology

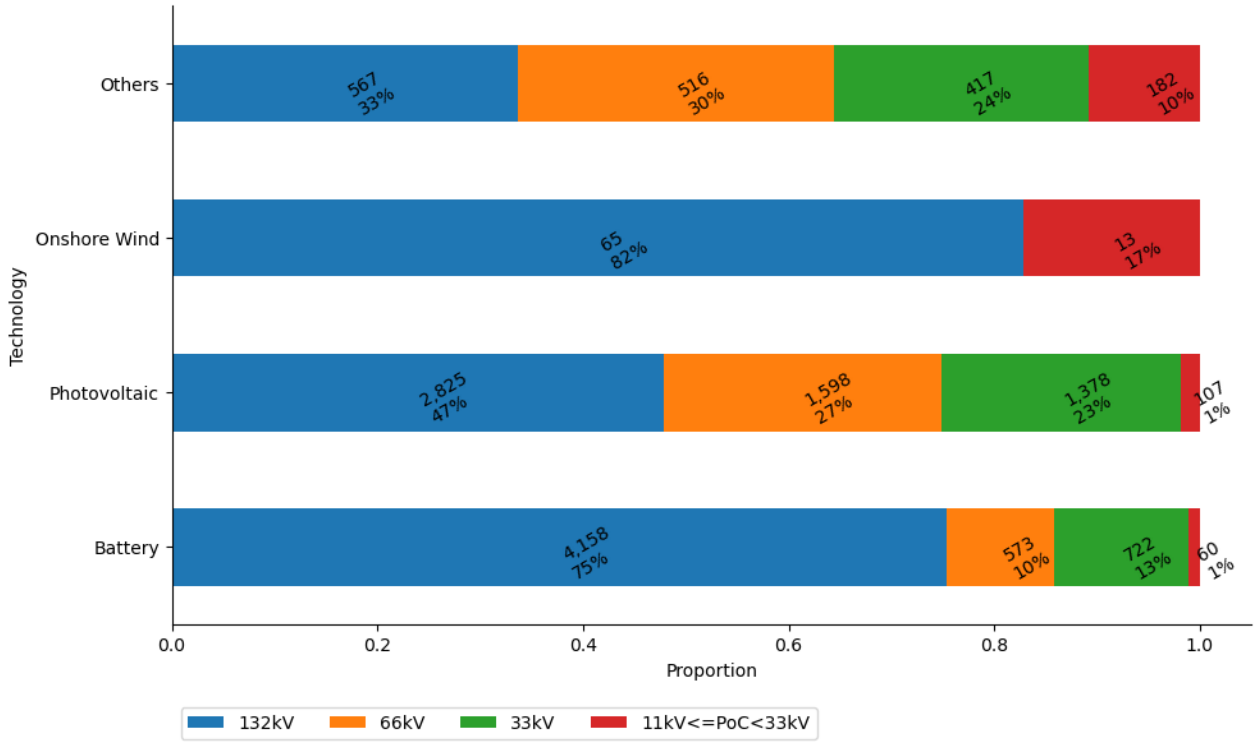
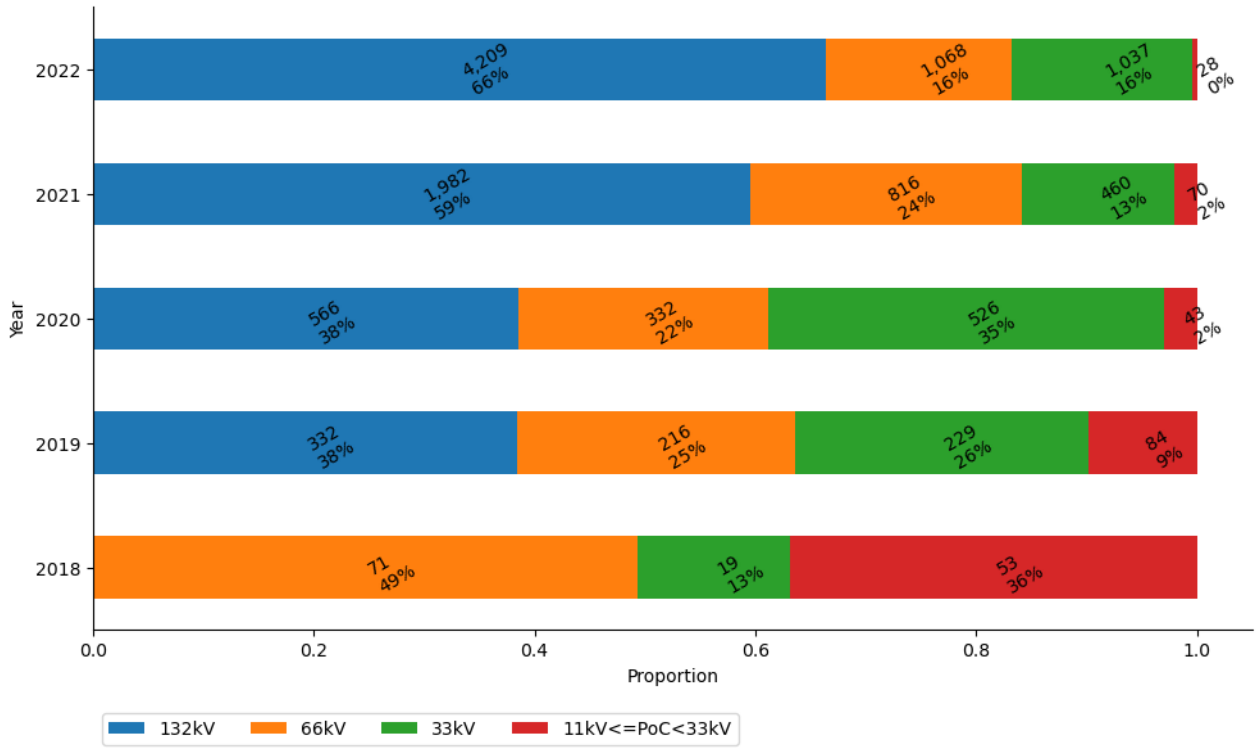


Figure 6-16: PoC voltage of accepted offers by year



PoC Voltage by Year: 132kV Rising Fast

Figure 6-16 shows the capacity and market share for different PoC voltage levels of accepted offers by year since 2018. 132kV experienced an expansion from 332MW, 38% market share in 2019 to 4,209MW in 2022 sharing 66% of the market. The offers to be connected on 66kV was 71MW in 2018, increased to 1,068MW in 2022 taking 18% of the market. The offers to be connected on 33kV saw an increase from 19MW in 2018 to 526MW in 2020 and a drop to 460MW in 2021 and then a growth to 1,037MW in 2022. The market share of accepted capacity for other voltage levels had been falling from 36% in 2018 to nearly 0% in 2022.

Top Players in Each Technology Area

Bluestone Energy leads Battery Storage and Photovoltaic, High Hedley Wind Farm leads onshore wind

Table 6-7 presents the top 5 players in each technology area with their accepted capacity (MW) and market share. Bluestone Energy leads the battery storage market with 1,729MW capacity counting 31.3% of the battery storage market. Bluestone Energy also ranked first in photovoltaic market with 320.8MW offers and 5.4% market share. Hedley Wind Farm is the largest player (82.8% market share) in the area of onshore wind technology with 65.2MW accepted capacity.

Table 6-7: Top players of accepted offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [1,729.0, 31.3%]	BLUESTONE ENERGY [320.8, 5.4%]	HIGH HEDLEY WIND FARM [65.2, 82.8%]	NETHERLANDS WAY VOLTA [120.0, 7.1%]
2	CHAPEL LANE BESS [250.0, 4.5%]	CREYKE BECK SOLAR [320.0, 5.4%]	PARK SPRING WIND FARM [8.5, 10.8%]	SALTHOLME GAS [100.0, 5.9%]
3	CALIFORNIA HYBRID SOLAR & BESS [150.0, 2.7%]	MILL LANE SOLAR PV [180.0, 3.0%]	OMYA WIND FARM [3.0, 3.8%]	GRANGE [74.7, 4.4%]
4	COAST ROAD BESS; AURA POWER [120.0, 2.2%]	DEWLEY HILL HYBRID BESS & SPV;	KNOSTROP STW (ARUP) WIND TURBINE [2.0, 2.5%]	HRS BIOMASS [63.0, 3.7%]
5	THINFORD STORAGE BESS [104.4, 1.9%]	SKEEBY [128.3, 2.2%]	-	BLYTH [58.4, 3.5%]
Total	**[2,473.4, 44.8%]**	**[1,399.1, 23.7%]**	**[78.7, 100.0%]**	**[416.1, 24.7%]**

The top 5 players in battery storage take approximately 44.8% of the market with about 2.5GW accepted capacity. Approximately 1.4GW photovoltaic offers are held by the top 5 players counting 23.7% market share. All of the onshore wind market is controlled by the top 3 players, holding 78.7MW capacity.

Top Players by Year

Top 5 players own approximately half of the market except for 2020

Table 6-8: Top players of accepted offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	GRANGE [68.7, 47.5%]	NETHERLANDS WAY VOLTA [120.0, 13.9%]	CALIFORNIA HYBRID SOLAR & BESS [150.0,	CREYKE BECK SOLAR [320.0, 9.6%]	BLUESTONE ENERGY [2,007.0, 31.6%]
2	PORT OF HULL DEVELOPMENT [19.9,	HELL HOLE & LOW MIDDLEFIELD	NEWCASTLE BATTERY STORAGE [99.8, 6.8%]	MILL LANE SOLAR PV [180.0, 5.4%]	CHAPEL LANE BESS [250.0, 3.9%]
3	CHAPEL LANE DIESEL - NON	SCURF DYKE SOLAR; REDCAR W2E;	LOW MOOR SOLAR & BESS [99.8, 6.8%]	AURA POWER [120.0, 3.6%]	KENLEY HOUSE GENERATION HUB;
4	SUNDERLAND, DEPTFORD TERRACE, SUNDERLAND	SKELTON PEAK GAS [49.3, 5.7%]	HAROP LANE [87.0, 5.9%]	THINFORD STORAGE BESS [104.4, 3.1%]	COAST ROAD BESS [120.0, 1.9%]
5	HOWDENS JOINERY NON-EXPORTING GENERATION [3.6, 2.5%]	CAMELA LANE SOLAR [49.0, 5.7%]	BAWTRY SOLAR FARM [51.0, 3.5%]	SIKBEREEN SOLAR FARM [104.0, 3.1%]	CHOPWELL HYBRID [100.4, 1.6%]
Total	**[116.7, 80.7%]**	**[498.3, 57.7%]**	**[487.6, 33.2%]**	**[828.4, 24.9%]**	**[2,927.4, 46.1%]**

Table 6-8 shows the top players by accepted capacity in each year since 2018. Grange dominated the market in 2018 with approximately 68.7MW and 47.5% market share, surpassed by Netherlands Way Volta in 2019 and California Hybrid Solar & Bess in 2020. Creyke Beck Solar took the champion in 2021 with 320MW capacity and 9.6% market share. Bluestone Energy dominated the 2022 market with more than 2GW capacity and 31.6% market share.

Totally, the market share of the top 5 players had decreased from 80.7% in 2018 to only 33.2% in 2020 although the capacity increased from 116.7MW to 487.6MW in the same period. The capacity held by the top 5 players kept growing in 2021 to 828.4MW and in 2022 to 2,927.4MW.

Accepted Offers in Electricity North West (ENW)

- EWW, counting 5% of the total DNO market with 4.7GW accepted capacity, has experienced a rising trend of accepted offers since 2019 dominated by battery storage and mainly connected with voltages of 132kV and 33kV.
- We saw a sprint of battery storage capacity in 2021 and fluctuations in photovoltaic capacity.
- Battery, photovoltaic and onshore wind offers have mainly been connected to 132kV. The connection of 132kV has seen an uptrend by year.
- Top 5 players own more than half of the accepted offers in all years and all technologies except for battery storage.

Accepted Offers by Year, Technology, Voltage and Top Players

Figure 6-17 shows the analysis of the proportion of accepted capacity in ENW versus other DNOs and accepted capacity by year, technology, voltage and top players.

ENW vs Other DNOs: the total accepted capacity of ENW is around 4.7GW taking 5% of the total market versus a total of approximately 89.4GW in other DNOs.

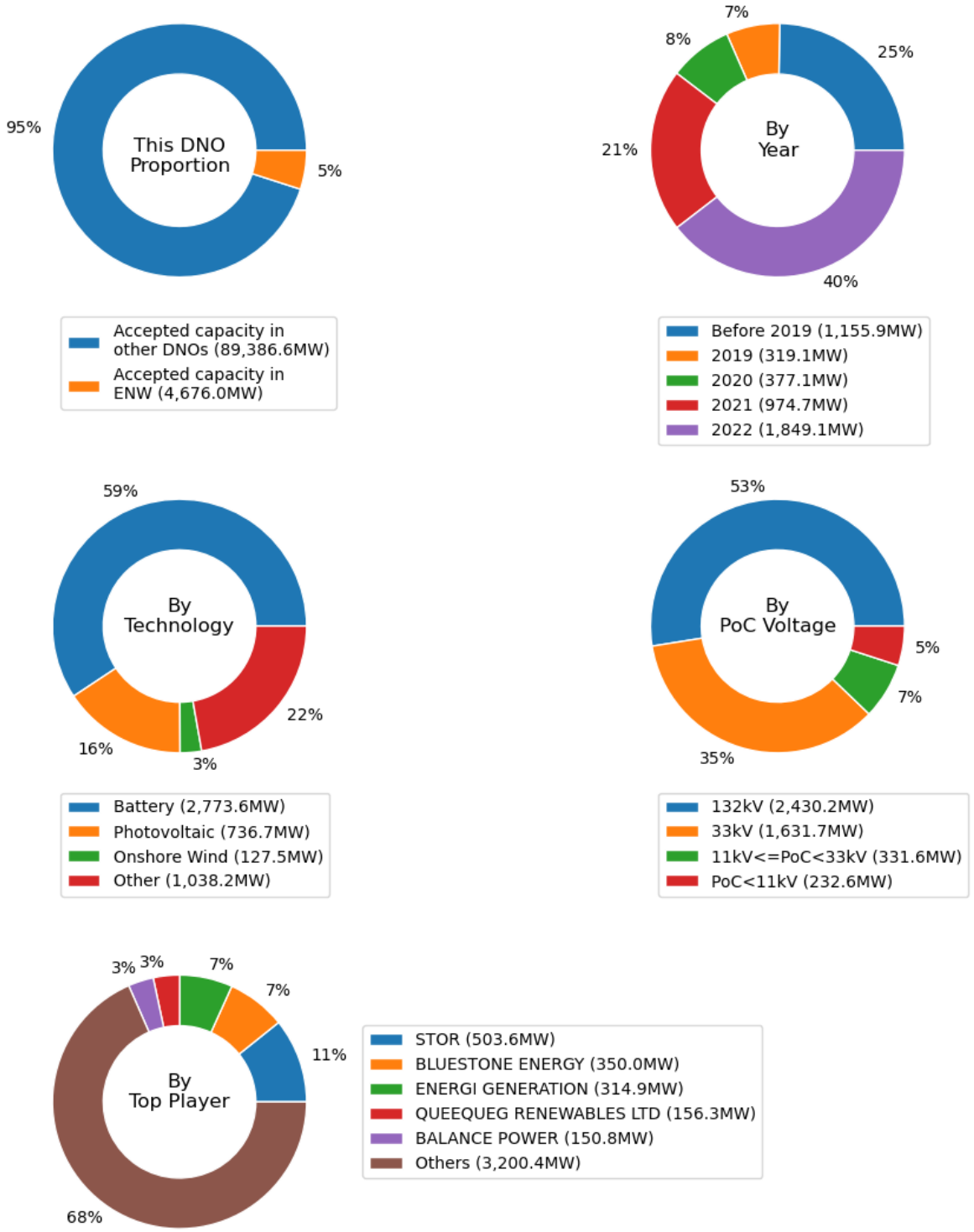
Accepted capacity by year: the market has been rising from 2019. The capacity has more than doubled in 2021 with 975MW compared to 2020 with 377MW and doubled again in 2022 with 1,849MW counting 40% of the market share.

Accepted capacity by technology: we see a domination of battery storage in ENW with more than 2.8GW capacity and 59% market share. Photovoltaic offers take 16% of the market with 736.7MW capacity followed by the only 127.5MW onshore wind. With around 1GW capacity, other technology shares 22% of the total market.

Accepted capacity by PoC voltage: 132kV and 33kV are the two main PoC voltage levels in ENW with approximately 2.4GW and 1.6GW capacity, counting 53% and 35% of the total offers, respectively.

Top Players: STOR is the dominator in ENW grid with more than 500MW capacity, 11% market share, followed by Bluestone Energy with 350MW capacity, 7%. Energi Generation is the third largest market player with 315MW offers (7%). The other two top players share approximately 3% of the market with approximately 150MW accepted offers each.

Figure 6-17: Accepted Capacity by Year, Technology, Voltage and Top Players



Technology by Year: Battery Storage Sprinting Whilst Photovoltaic Fluctuating

Figure 6-18: Yearly accepted offers of various technologies since 2018

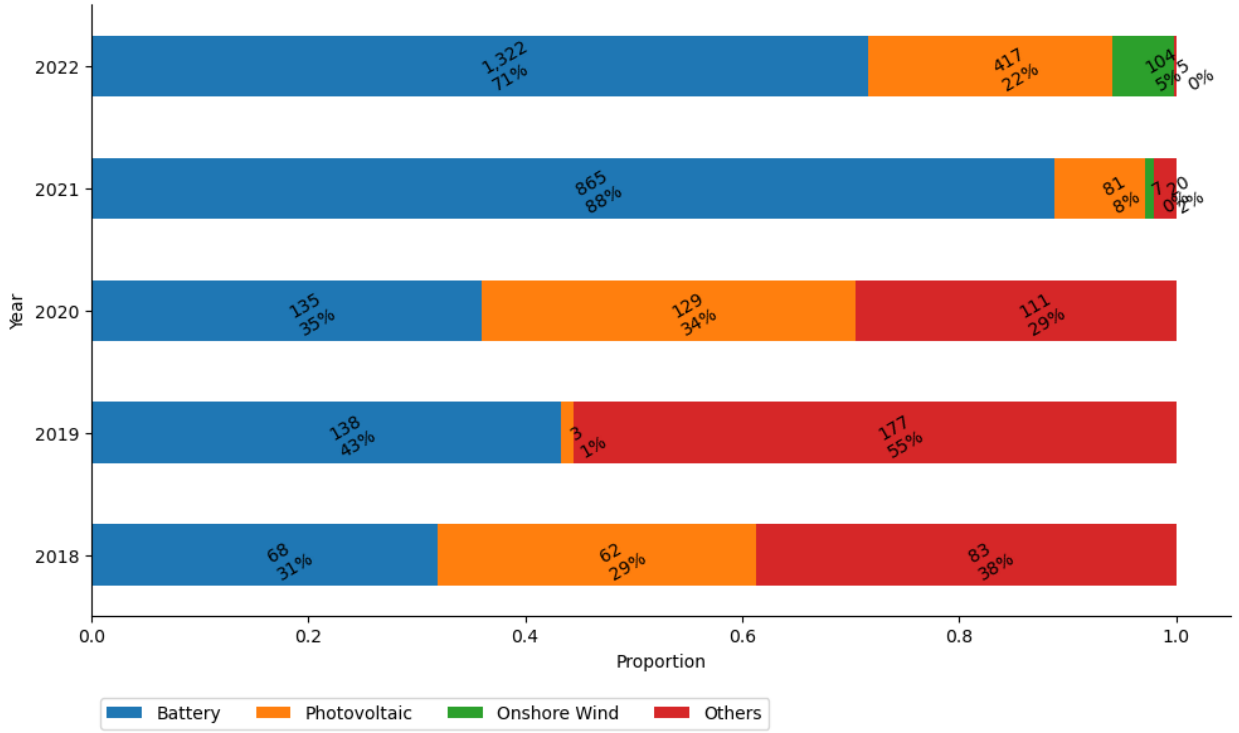


Figure 6-18 shows the yearly accepted capacity and market proportion for various technologies since 2018 in ENW grid. We see a fast expansion of battery storage in ENW from 2020 to 2022, with capacity increasing from 135MW to 1,322MW and market share growing from 35% to 71%. The rising of the market share of battery storage squeezed the market occupation of “other” technology from 55% in 2019 to nearly 0% in 2022. The development of photovoltaic sites fluctuated with only 1% market share in 2019 and a followed peak of 34% in 2020 but dropped again to 8% in 2021 and recovered to 22% in 2022.

PoC Voltage by Technology: 132kV Dominated the connections

We show the capacity at various PoC voltage levels of accepted offers for different technologies in **Figure 6-19**. The most popular connection voltage for battery storage system is 132kV which will digest more than 1.8GW capacity taking 66% of the total battery capacity, followed by 33kV with 818MW counting 29%. 132kV and 33kV are also the main PoC voltage levels for photovoltaic offers, with 345MW and 225MW connections counting 29% and 32% of the total photovoltaic capacity, respectively. 132kV dominated 78% of the connection work for onshore wind offers with 100MW capacity.

Figure 6-19: PoC voltage of accepted offers by technology

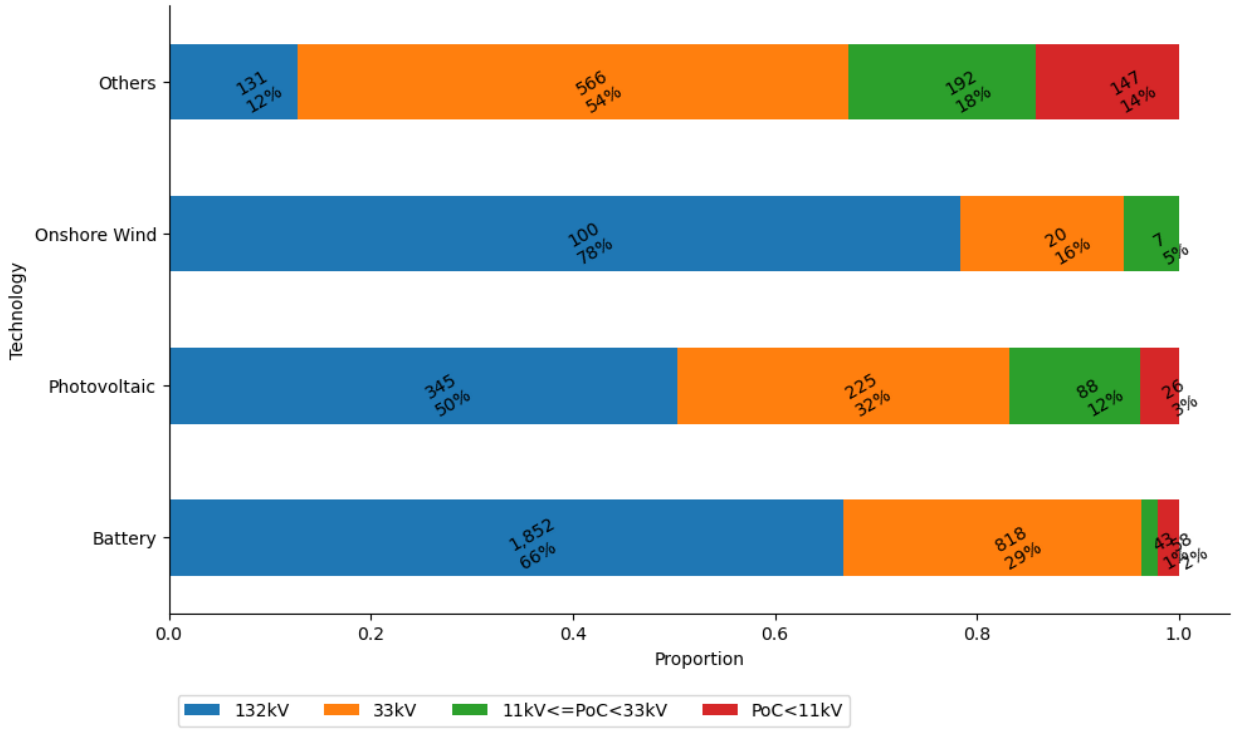
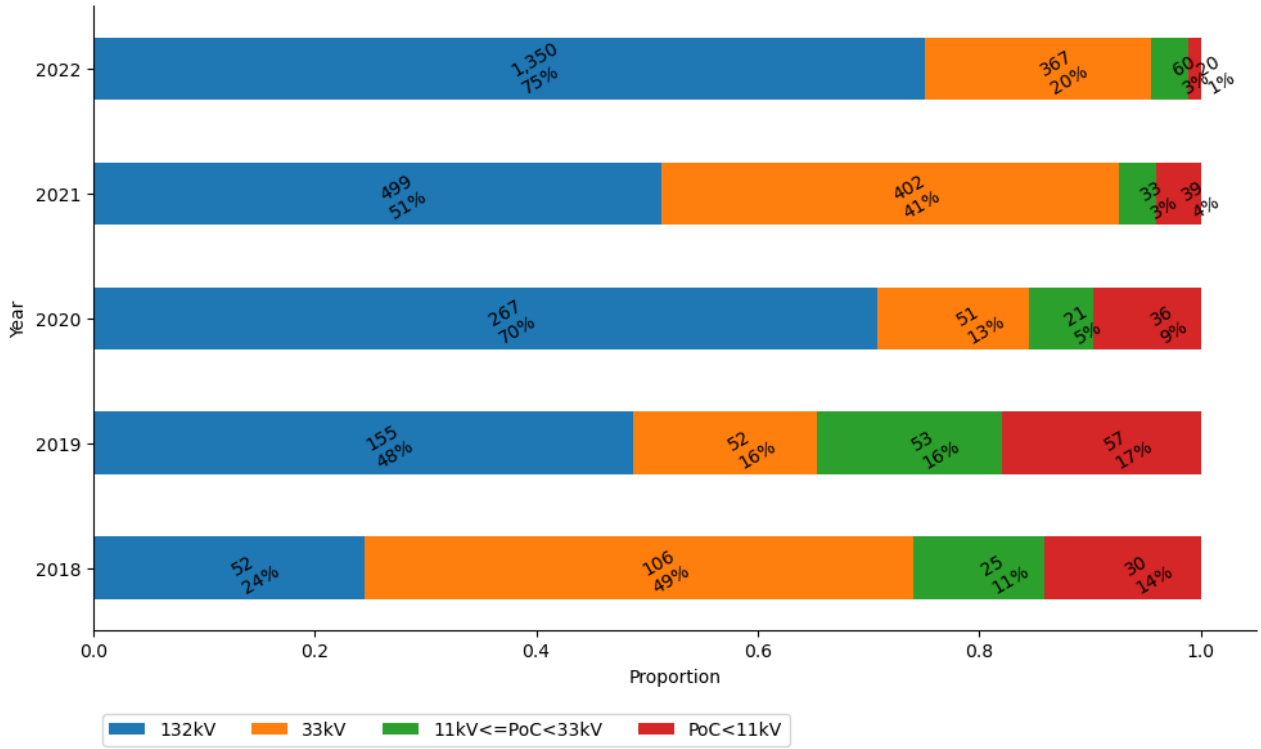


Figure 6-20: PoC voltage of accepted offers by year



PoC Voltage by Year: 132kV Rising Fast Followed by 33kV

Figure 6-20 shows the capacity and market share for different PoC voltage levels of accepted offers by year since 2018. 132kV experienced an expansion from only 52MW, 24% market share to around 1.4GW in 2022 sharing 75% of the market. The offers to be connected on 33kV saw an increase from 106MW in 2018 to 367MW in 2022 although its market share more than halved from 49% to 20% due to the boosting market share in 132kV. The market share of other PoC voltage levels has declined fast.

Top Players in Each Technology Area

Bluestone Energy leads battery storage, CXGroup dominates photovoltaic, Peel Cubico Renewables leads onshore wind

Table 4-1 presents the top 5 players in each technology area with their accepted capacity (MW) and market share. Bluestone Energy leads the battery storage market with 350MW capacity counting 12.6% of the battery storage market. CXGroup holds 150MW photovoltaic offers with 20.4% market share. Peel Cubico Renewables is the largest player (78.4% market share) in the area of onshore wind technology with 100MW accepted capacity. STOR dominates the accepted offers in other technologies taking 36% market share with 373.7MW capacity.

Table 6-9: Top players of accepted offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [350.0, 12.6%]	CXGROUP [150.0, 20.4%]	PEEL CUBICO RENEWABLES LIMITED [100.0, 78.4%]	STOR [373.7, 36.0%]
2	ENERGI GENERATION [314.9, 11.4%]	VATTENFALL; ROADNIGHT TAYLOR; HARMONY ENERGY LTD [49.9,	ENERGY CONTOUR [8.6, 6.8%]	MT GREEN POWER LTD [50.5, 4.9%]
3	QUEEQUEG RENEWABLES LTD [145.3, 5.2%]	INNOVA [47.4, 6.4%]	HAMBLEDON WIND LTD [7.9, 6.2%]	ENWL CONSTRUCTION & MAINTENANCE LTD [45.6, 4.4%]
4	BALANCE POWER [130.0, 4.7%]	OPDE UK LIMITED [40.0, 5.4%]	RIDGE CLEAN ENERGY [7.0, 5.5%]	ALKANE ENERGY [44.7, 4.3%]
5	STOR [129.9, 4.7%]	S4N CORYTON LTD [32.6, 4.4%]	O&G GROUP LIMITED [4.0, 3.1%]	HARTMOOR HOLDINGS LIMITED [42.1, 4.1%]
Total	**[1,070.1, 38.6%]**	**[419.7, 57.0%]**	**[127.5, 100.0%]**	**[556.6, 53.6%]**

The top 5 players in battery storage take approximately 38.6% of the market with about 1GW accepted capacity. Approximately 420MW photovoltaic offers are held by the top 5 players counting 57% market share. All of the onshore wind market is controlled by the top 5 players, holding 127.5MW capacity.

Top Players by Year

Top 5 players own more than half of the market

Table 6-10: Top players of accepted offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	WELKIN MILL POWER LIMITED [52.6, 24.5%]	SUEZ RECYCLING AND RECOVERY UK LTD [52.6, 16.5%]	INNOVA [58.4, 15.5%]	ENERGI GENERATION [269.9, 27.7%]	BLUESTONE ENERGY [350.0, 18.9%]
2	S4N CORYTON LTD [32.6, 15.2%]	CORIOLIS ENERGY [52.5, 16.5%]	SMITH BROTHERS [49.9, 13.2%]	FPC ELECTRIC LAND [102.0, 10.5%]	QUEEQUEG RENEWABLES LTD [156.3, 8.5%]
3	ELECTRICITY NORTH WEST (CONSTRUCTION & MAINTENANCE) LTD [31.6, 14.7%]	MT GREEN POWER LTD [50.5, 15.8%]	ENWL CONSTRUCTION & MAINTENANCE LTD [45.6, 12.1%]	LANCASTER POWER LIMITED [75.0, 7.7%]	CXGROUP [150.0, 8.1%]
4	LIGHTSOURCE; BRIMROD ENERGY CENTRE LIMITED [21.1,	ABERLA SERVICES [31.6, 9.9%]	GRID SERVE; OPDE UK LIMITED [40.0, 10.6%]	EUROPEAN ENERGY DEV LTD [50.0, 5.1%]	BALANCE POWER; PEEL CUBICO RENEWABLES LIMITED
5	BALANCE POWER [7.8, 3.6%]	SMITH BROTHERS [31.0, 9.7%]	VEOLIA [35.8, 9.5%]	FLEXION ENERGY UK STORAGE LTD [49.9, 5.1%]	STOR [99.9, 5.4%]
Total	**[166.7, 77.7%]**	**[218.3, 68.4%]**	**[269.7, 71.5%]**	**[546.8, 56.1%]**	**[956.2, 51.7%]**

Table 4-2 shows the top players by accepted capacity in each year since 2018. Welkin Mill Power dominated the market in 2018 with 52.6MW and 24.5% market share, surpassed by Suez Recycling in 2019 and Innova in 2020. Energi Generation took the champion in 2021 with 270MW capacity and 27.7% market share which is overtaken by Bluestone Energy with 350MW and 18.9% market share in 2022.

Totally, the top 5 players have owned more than half of the market in each year with a falling trend from 77.7% to 51.7% from 2018 to 2022 although the absolute capacity increased from about 167MW to approximately 956MW.

Accepted Offers in SP Energy Networks (SPEN)

- SPEN counts 9% of the total DNO market with 8.4GW accepted capacity. Onshore wind, battery storage and photovoltaic share more than 80% of the market in total and mainly connected to the 33kV voltage.
- Top 5 players own more than 50% of the market share in photovoltaic sites.
- We do not analyse any data related to accepted offers across timeline for SPEN due to the lack of date information in the ECR data sheet provided by SPEN as illustrated in **Table 2-1**.

Accepted Offers by Year, Technology, Voltage and Top Players

Figure 6-21 shows the analysis of the proportion of accepted capacity in SPEN versus other DNOs and accepted capacity by year, technology, voltage and top players.

ENW vs Other DNOs: the total accepted capacity of ENW is around 8.4GW taking 9% of the total market versus a total of approximately 85.7GW in other DNOs.

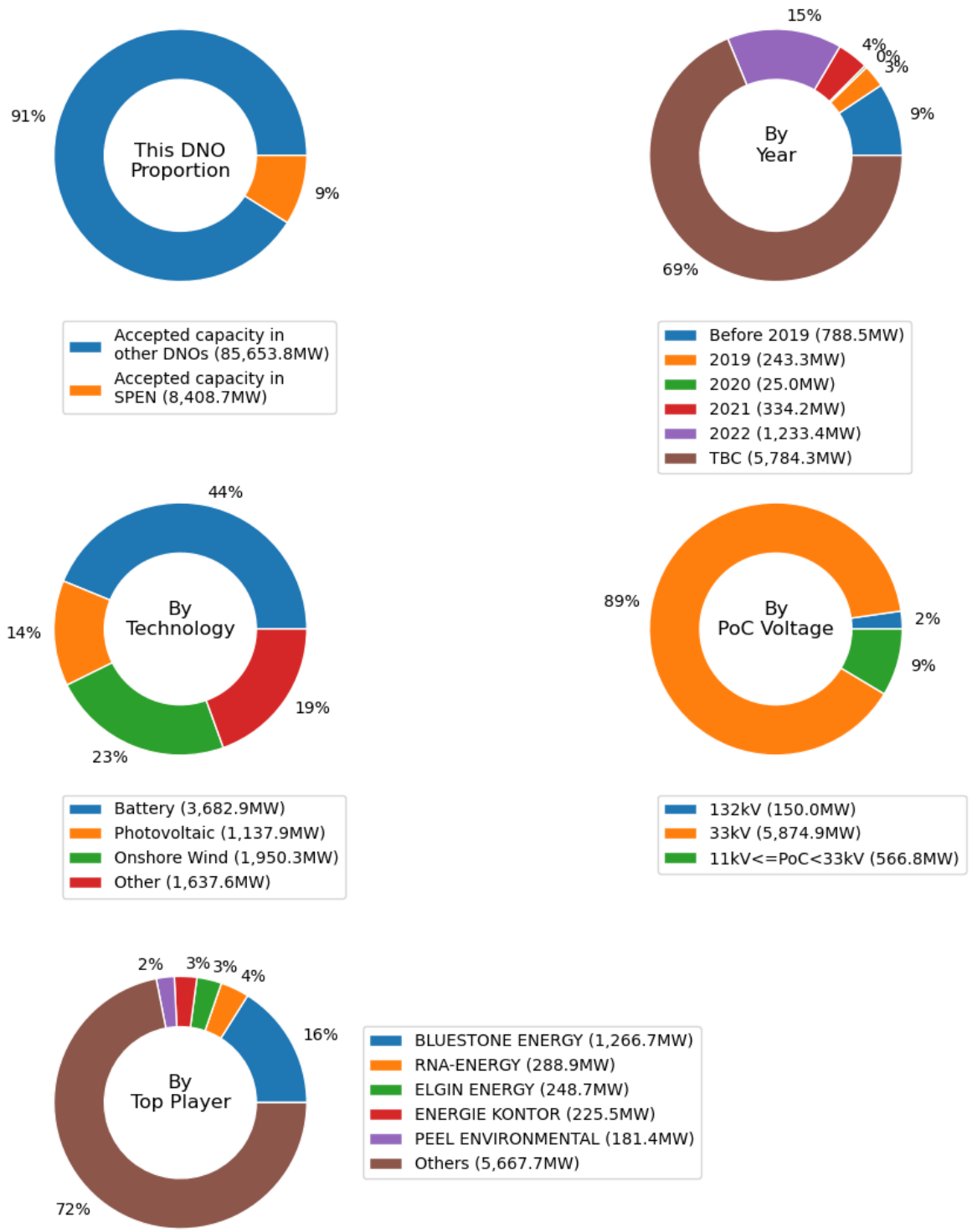
Accepted capacity by year: 69% of the accepted offers has recorded without an accepted date which has distorted the analysis of accepted capacity by year.

Accepted capacity by technology: we see a domination of battery storage with 44% market share in SPEN. The rest of the market is dominated by onshore wind with about 2GW capacity and 23% market share, followed by “other” technology with 1.6GW capacity and 19% market share. Photovoltaic offers take 14% of the market with approximately 1.1GW capacity ranking at the bottom in all technologies.

Accepted capacity by PoC voltage: 33kV dominates the connection voltage by 89% market share with around 5.9GW capacity. The rest of the offers will mainly be connected to a PoC with a voltage level between 11kV (incl.) and 33kV (excl.).

Top Players: Bluestone Energy is the dominator in SPEN grid with about 1,267MW and 16% market share, followed by RNA-Energy with 288.9MW, 4%. Elgin Energy is the third largest market player with more than 248MW offers (3%) followed by Energie Kontor with around 225.5MW (3%). The fifth player holds about 181.4MW capacity and takes 2% of the market.

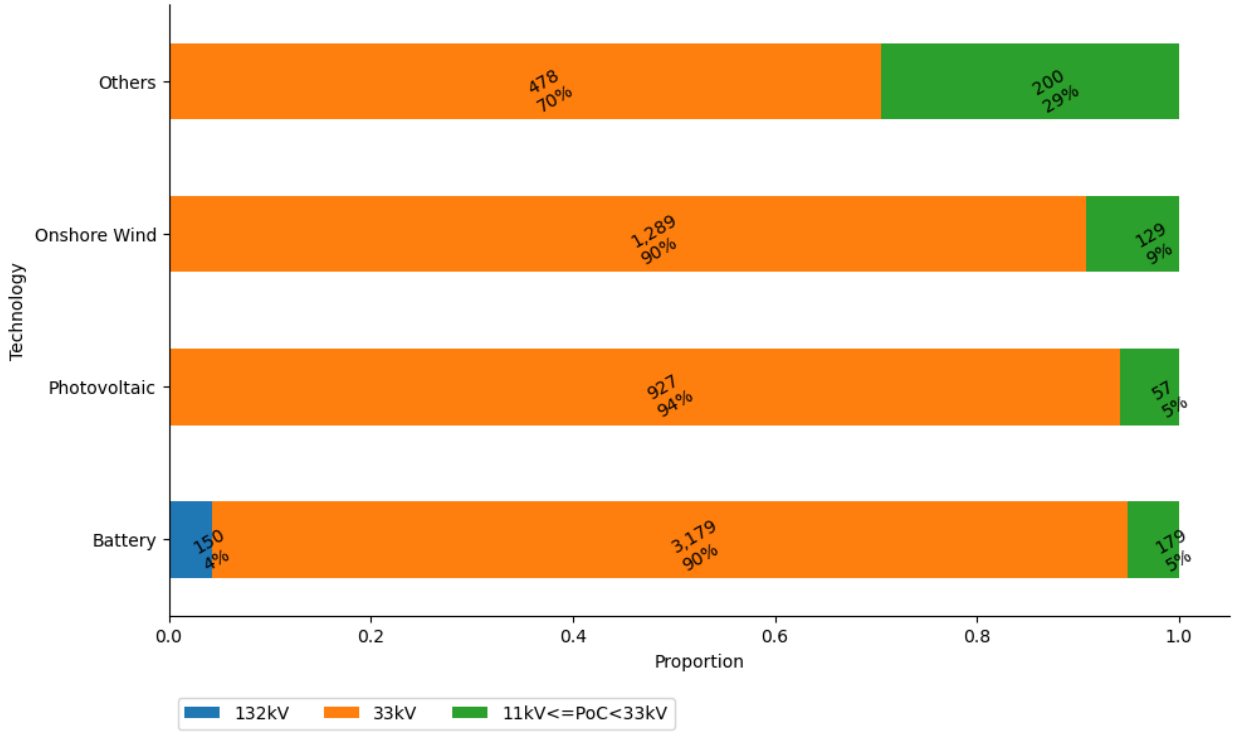
Figure 6-21: Accepted Capacity by Year, Technology, Voltage and Top Players



PoC Voltage by Technology: 33kV Dominates the Connections

We show the capacity at various PoC voltage levels of accepted offers for different technologies in **Figure 6-22**. 33kV dominates the connections for all technologies with at least 70% market share. Other connections will mainly happen on voltage levels between 11kV (incl.) and 33kV (excl.).

Figure 6-22: PoC voltage of accepted offers by technology



Top Players in Each Technology Area

Bluestone Energy leads battery storage, Elgin Energy dominates photovoltaic and Energie Kontor leads onshore wind

Table 6-11 presents the top 5 players in each technology area with their accepted capacity (MW) and market share in SPEN. Bluestone Energy leads the battery storage market with approximately 1,129MW capacity counting 31.5% of the battery storage market. Elgin Energy holds 198.8MW photovoltaic offers with 19% market share. Energie Kontor is the largest player (12.1% market share) in the area of onshore wind technology with 225.5MW accepted capacity.

The top 5 players in battery storage take approximately 48% of the market with about 1,721MW accepted capacity. Approximately 571.4MW photovoltaic offers are held by the top 5 players counting 54.5% of the market. 31.5% of the onshore wind market is controlled by the top 5 players, holding 588.5MW capacity.

Table 6-11: Top players of accepted offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [1,129.0, 31.5%]	ELGIN ENERGY [198.8, 19.0%]	ENERGIE KONTOR [225.5, 12.1%]	PEEL ENVIRONMENTAL [170.4, 12.4%]
2	RNA-ENERGY [288.9, 8.1%]	BLUESTONE ENERGY [137.7, 13.1%]	CLEANEARTH ENERGY [105.9, 5.7%]	SNOWDONIA PUMPED HYDRO (QUARRY BATTERY
3	VITAL ENERGI [151.2, 4.2%]	LOCOGEN [89.9, 8.6%]	CLOCAENOG [96.0, 5.1%]	UTILITY RECOVERIES SPECIALISTS LTD [89.0, 6.5%]
4	ROARING HILL ENERGY STORAGE LTD [79.8, 2.2%]	LOCOGEN SOLAR DEVELOPMENTS LTD [85.0, 8.1%]	MUIRHALL ENERGY [88.5, 4.7%]	H P TROTTER T/A PRINTONAN FARM [51.0, 3.7%]
5	BEARSDEN BESS LIMITED [71.8, 2.0%]	NATURALIS ENERGY DEVELOPMENTS [60.0, 5.7%]	LEITHENWATER WIND ENERGY HUB LIMITED [72.6, 3.9%]	EARLS GATE ENERGY CENTRE [49.5, 3.6%]
Total	**[1,720.7, 48.0%]**	**[571.4, 54.5%]**	**[588.5, 31.5%]**	**[459.8, 33.4%]**

Chapter 7. Connected Offers (2018-2022) at Individual DNO Level

This chapter presents a detailed analysis for connected capacity between 2018 and 2022 at NGED, UKPN, NPG and ENW. We excluded SSE and SPEN due to the lack of connected date information in their ECR data sheets as illustrated in Table 2-1.

Connected Offers (2018-2022) in Western Power Distribution (NGED)

- NGED, counting 36% of the total DNO market with 2.5GW connected capacity, had followed a down trend from 494.2MW in 2018 to 221.5MW in 2019 but recovered to 337.4MW in 2021 and 309.1MW in 2022.
- We saw the connected capacity of photovoltaic, battery storage and onshore wind had recovered from their low reached in 2019.
- Battery storage and photovoltaic were mainly to be connected to 33kV, whilst onshore wind on 132kV, 66kV and 33kV.
- The capacity connected to 33kV and below dominated the market in all years from 2018 to 2022.

Connected Offers by Year, Technology, Voltage and Top Players

Figure 7-1 shows the analysis of the proportion of connected capacity in NGED versus other DNOs and connected capacity by year, technology, voltage and top players.

NGED vs Other DNOs: the total connected capacity in NGED was around 2.5GW taking 36% of the total market versus a total of approximately 4.4GW in other DNOs.

Connected capacity by year: the market reached a trough in 2019 with 221.5MW declining from 494.2MW in 2018 and recovered to 337.4MW in 2021, 309.1MW in 2021.

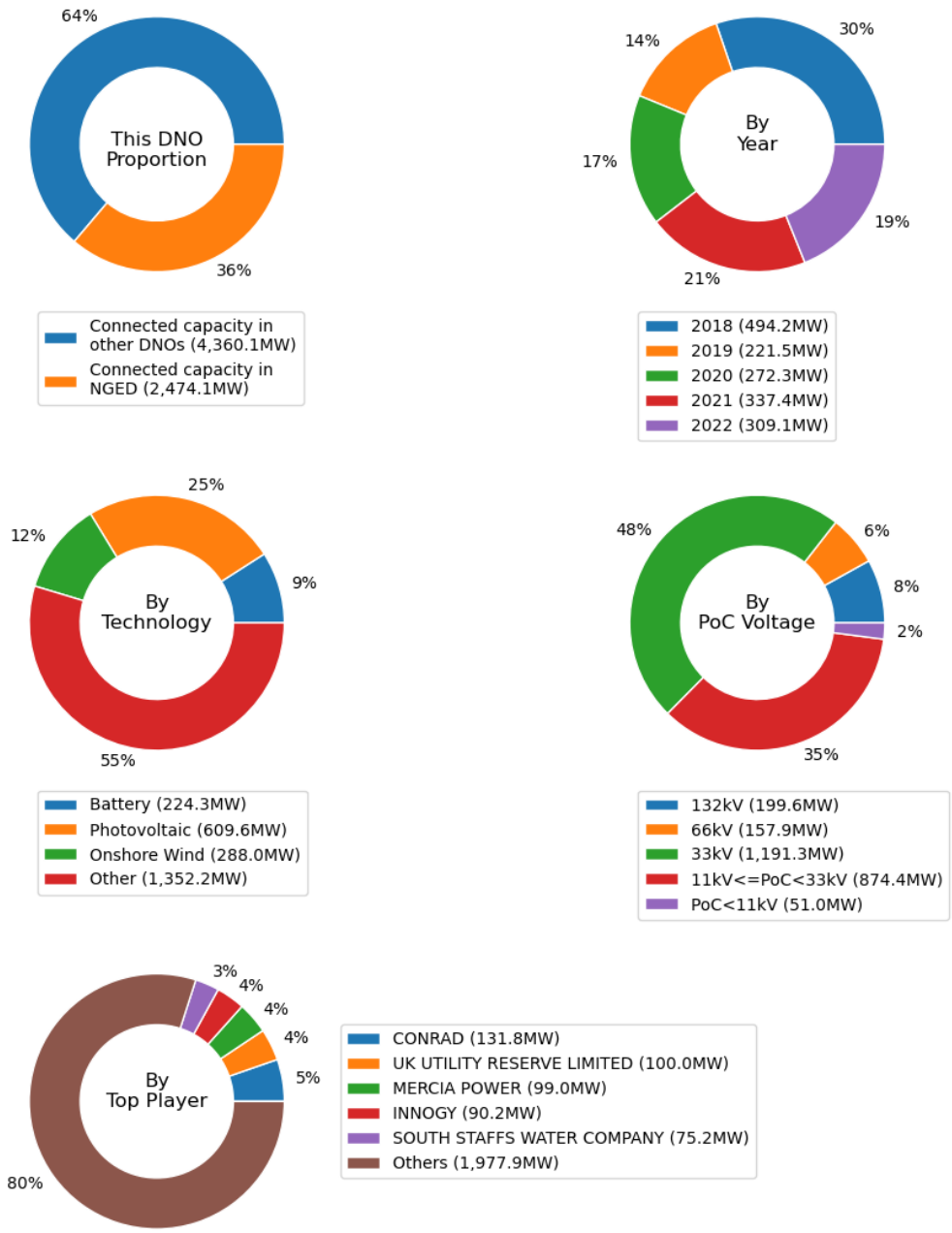
Connected capacity by technology: the connected capacity utilising photovoltaic technology was nearly 610MW taking 25% of the market share. Onshore wind had been installed 288MW sharing 12% of the market followed by battery storage which had been connected 224.3MW with 9% market share. The rest 55% of the market was shared by other technologies.

Connected capacity by PoC voltage: almost half of the offers had been connected to 33kV with nearly 1.2GW capacity and 48% market share, followed by the connections between 11kV (incl.) and 33kV (excl.) with 874.4MW capacity

and 35% market share. 8% and 6% of the market had been shared by 132kV and 66kV with connected capacity of 199.6MW and 157.9MW, respectively.

Top Players: Conrad led the connection market in NGED by 131.8MW and 5% market share, followed by UK Utility reserve, Merica Power and Innogy with 100MW, 99MW and 90.2MW, respectively, taking around 4% market share each. 3% of the market was shared by South Staffs Water Company with 75.2MW.

Figure 7-1: Connected Capacity (2018-2022) by Year, Technology, Voltage and Top Players



Technology by Year: Photovoltaic and Battery Storage Recovered from Low, Onshore Wind Keeps Shrinking

Figure 7-2: Yearly connected offers of various technologies since 2018

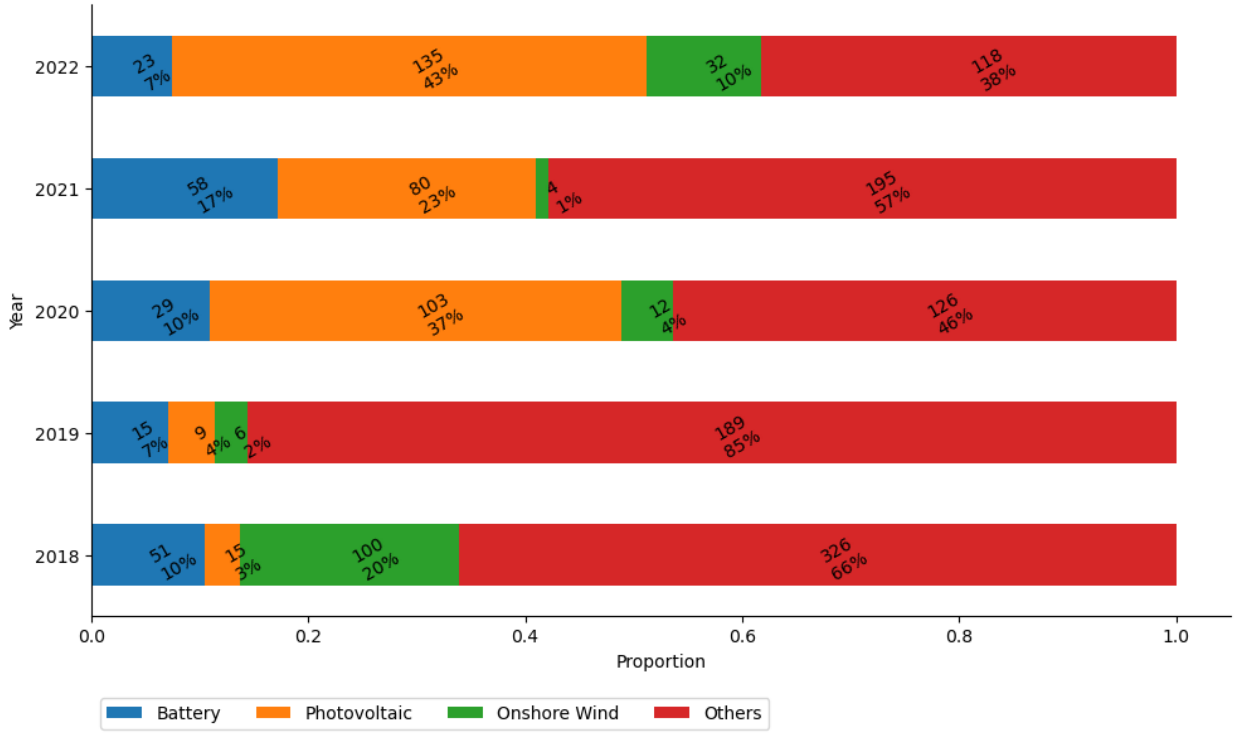


Figure 7-2 shows the yearly connected capacity and market proportion for various technologies since 2018 in NGED. Photovoltaic and battery storage market reached their low in 2019 with only 9MW and 15MW connected, respectively, but recovered to 103MW and 29MW in 2020 counting 37% and 10%, respectively, followed by a drop in photovoltaic to 80MW and a continuous growth in battery storage to 58MW in 2021. 135MW and 23MW capacity has been connected with photovoltaic and battery storage, respectively, in 2022. The connected capacity of onshore wind had seen a decline from 100MW, 20% market share in 2018 to only 4MW, 1% market share in 2021, but recovered to 32MW, 10%.

PoC Voltage by Technology: 33kV Led the Connections of Battery Storage and Photovoltaic

We show the capacity at various PoC voltage levels of connected offers for different technologies in **Figure 7-3**. 181MW battery storage capacity and 335MW photovoltaic capacity had been connected to 33kV in NGED counting 80% and 55% of their total capacities, respectively. 97MW onshore wind had been connected to 132kV with a market share of 33% followed the 88MW capacity connected to 66kV counting 30% market share, and the 72MW capacity connected to 33kV with 25% market share. In terms of other technologies, 673MW had been connected to a voltage level between 11kV(incl.) and 33kV (excl.) with 49% of the market share followed by the 601MW, 44% market share, connected to 33kV.

Figure 7-3: PoC voltage of connected offers by technology

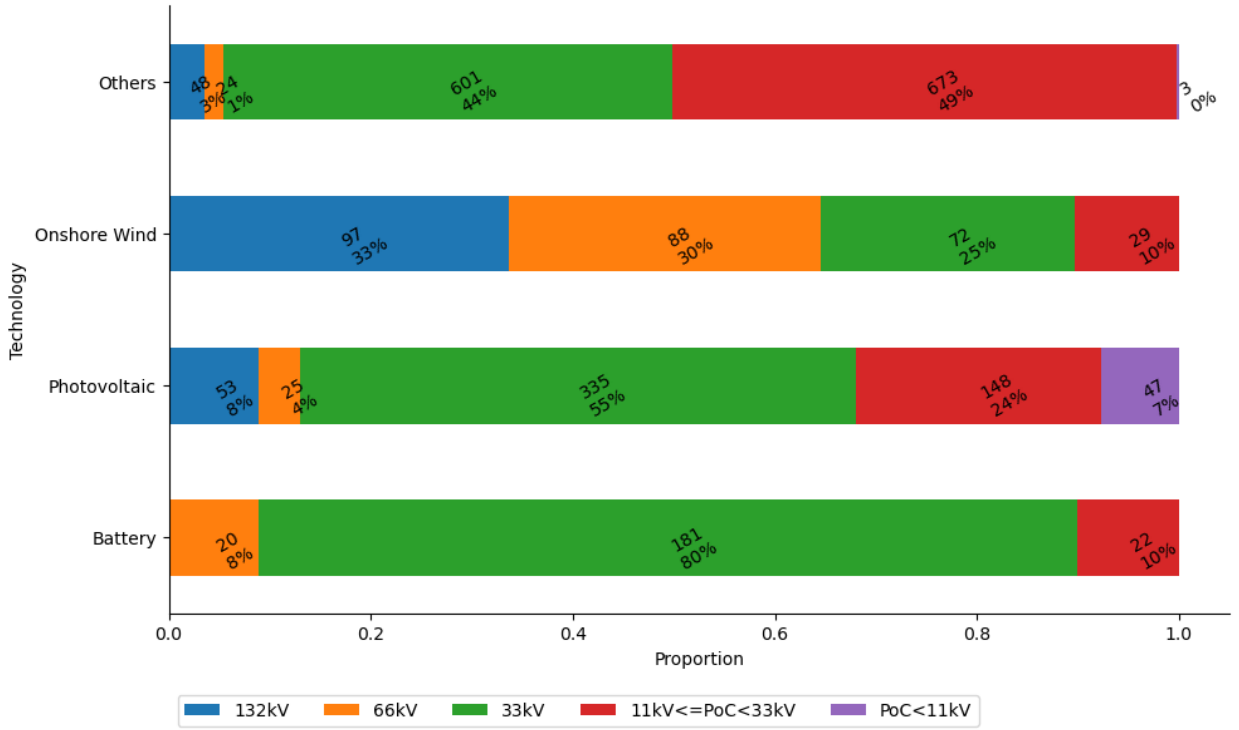
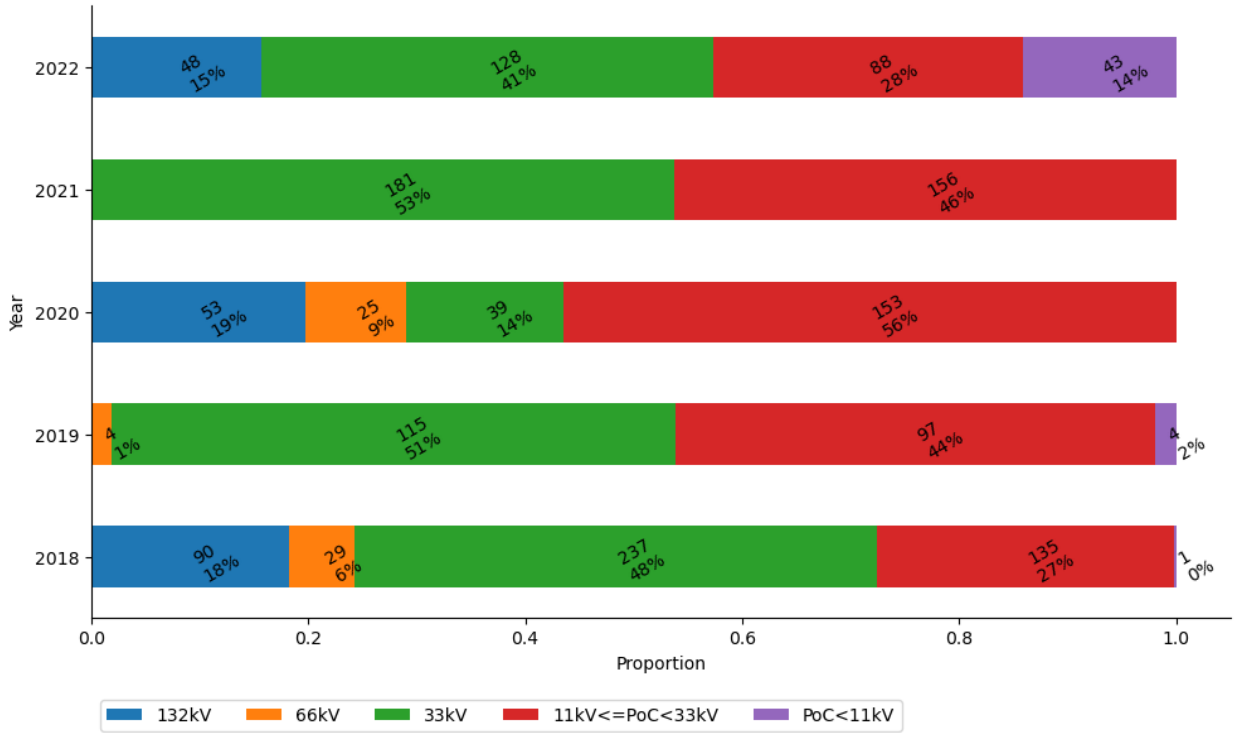


Figure 7-4: PoC voltage of connected offers by year



PoC Voltage by Year: 33kV and Below Dominated the Connections in All Years

Figure 7-4 shows the capacity and market share for different PoC voltage levels of connected offers by year since 2018. The capacity connected to 33kV had decreased to 39MW in 2020 from 237WM in 2018 and recovered to 128MW counting 41% market share in 2022. The connected capacity on voltage levels between 11kV (incl.) and 33kV (excl.) had been fluctuating around 100MW with a peak of market share of 56% in 2020. 132kV had seen 90MW connections in 2018 and 48MW in 2022 sharing 15% of the market.

Top Players in Each Technology Area

SSDC Opium Power led battery storage, Greenfileds (F) dominated photovoltaic and Innogy led onshore wind

Table 7-1 presents the top 5 players in each technology area with their connected capacity (MW) and market share. SSDC Opium Power led the battery storage market with 27.7MW capacity counting 12.4% of the battery storage market. Greenfileds (F) held 53.9MW photovoltaic offers with 8.8% market share, ranking at the top in the photovoltaic market. Innogy was the largest player (31.3% market share) in the area of onshore wind technology with 90.2MW connected capacity.

Table 7-1: Top players of connected offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	SSDC OPIUM POWER LIMITED [27.7, 12.4%]	GREENFIELDS (F) LIMITED [53.9, 8.8%]	INNOGY [90.2, 31.3%]	CONRAD [131.8, 9.7%]
2	SANDWELL POWER LTD [25.7, 11.5%]	EEB [45.6, 7.5%]	GARREG LWYD ENERGY LTD [34.0, 11.8%]	UK UTILITY RESERVE LIMITED [100.0, 7.4%]
3	HC ESS2 LIMITED [22.8, 10.2%]	DCP 179 DEEMED CAPACITY [38.4, 6.3%]	SCOTTISHPOWER RENEWABLES [32.5, 11.3%]	MERCIA POWER [99.0, 7.3%]
4	WEDNESBURY POWER LTD [21.4, 9.6%]	VOLTALIA UK LTD [32.0, 5.2%]	LLYNFI AFAN RENEWABLE ENERGY PARK	SOUTH STAFFS WATER COMPANY [75.2, 5.6%]
5	ARL [21.1, 9.4%]	NEXTPOWER SPV [25.2, 4.1%]	PENNANT WALTERS [20.0, 6.9%]	COVANTA ENERGY LIMITED [48.6, 3.6%]
Total	**[118.7, 52.9%]**	**[195.1, 32.0%]**	**[201.5, 70.0%]**	**[454.5, 33.6%]**

The top 5 players in battery storage took approximately 53% of the market with about 118.7MW connected capacity. 195.1W photovoltaic connected capacity was held by the top 5 players counting 32% market share. The top 5 players in onshore wind sites hold more than 201MW capacity with 70% market share.

Top Players by Year

Market share of top players peaked in 2019

Table 7-2 shows the top players of connected capacity in each year since 2018. Innogy was the top player in 2018 with 90.2MW capacity and 18.3% market share, surpassed by Viridor in 2019 with 44.4MW, 20% market share. Southstaffs Water Company ranked top in 2020 with 75.2MW capacity and 27.6% market share.

Conrad led the market in 2021 with 38.5MW capacity and 11.4% market share. Convanta Energy took the champion again in 2022 by 48.6MW and 15.7% market share.

Totally, the markets share of the top 5 players had increased from 20.7% to 74.4% from 2018 to 2019 then decreased to 60.2% in 2022.

Table 7-2: Top players of connected offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	INNOGY [90.2, 18.3%]	VIRIDOR [44.4, 20.0%]	SOUTH STAFFS WATER COMPANY [75.2, 27.6%]	CONRAD [38.5, 11.4%]	COVANTA ENERGY LIMITED [48.6, 15.7%]
2	UK UTILITY RESERVE LIMITED [60.0, 12.1%]	UK UTILITY RESERVE LIMITED [40.0, 18.1%]	GREENFIELDS (F) LIMITED [53.9, 19.8%]	UNIVERSITY HOSPITALS BRISTOL AND WESTON NHS FOUNDATION	EEB [45.6, 14.8%]
3	MERCIA POWER [53.4, 10.8%]	HAMBLE POWER LIMITED [36.0, 16.3%]	SSDC OPIUM POWER LIMITED [27.7, 10.2%]	VOLTALIA UK LTD [32.0, 9.5%]	DCP 179 DEEMED CAPACITY [38.4, 12.4%]
4	BANBURY POWER [24.0, 4.9%]	MERCIA POWER [24.1, 10.9%]	NEXTPOWER LOWER STRENSHAM LIMITED [25.0, 9.2%]	SANDWELL POWER LTD [25.7, 7.6%]	SCOTTISHPOWER RENEWABLES [32.5, 10.5%]
5	KILN POWER LIMITED [22.7, 4.6%]	HELE MANOR LIMITED [20.3, 9.2%]	CONRAD [9.3, 3.4%]	FUTURE EARTH ENERGY (DRAKELOW) LIMITED [23.8, 7.0%]	ARL [21.1, 6.8%]
Total	**[250.3, 50.7%]**	**[164.8, 74.4%]**	**[191.2, 70.2%]**	**[153.0, 45.3%]**	**[186.1, 60.2%]**

Connected Offers (2018-2022) in UK Power Networks (UKPN)

- UKPN, counting 24% of the total DNO market with 1.6GW connected capacity, had followed a down trend of the connected capacity from 364.4MW in 2018 to 141.7MW in 2019 but recovered to 257.2MW in 2021 and dropped again to 96.8MW in 2022.
- We saw the market share of photovoltaic and battery storage reached their highs in 2019 and 2021, respectively.
- Photovoltaic and onshore wind were mainly to be connected to 33kV, whilst battery storage on 132kV.
- The capacity connected to 132kV and 33kV dominated the market in all years from 2018 to 2022.

Connected Offers by Year, Technology, Voltage and Top Players

Figure 7-5 shows the analysis of the proportion of connected capacity in UKPN versus other DNOs and connected capacity by year, technology, voltage and top players.

UKPN vs Other DNOs: the total connected capacity in UKPN was nearly 1.6GW taking 24% of the total market versus a total of approximately 5GW in other DNOs.

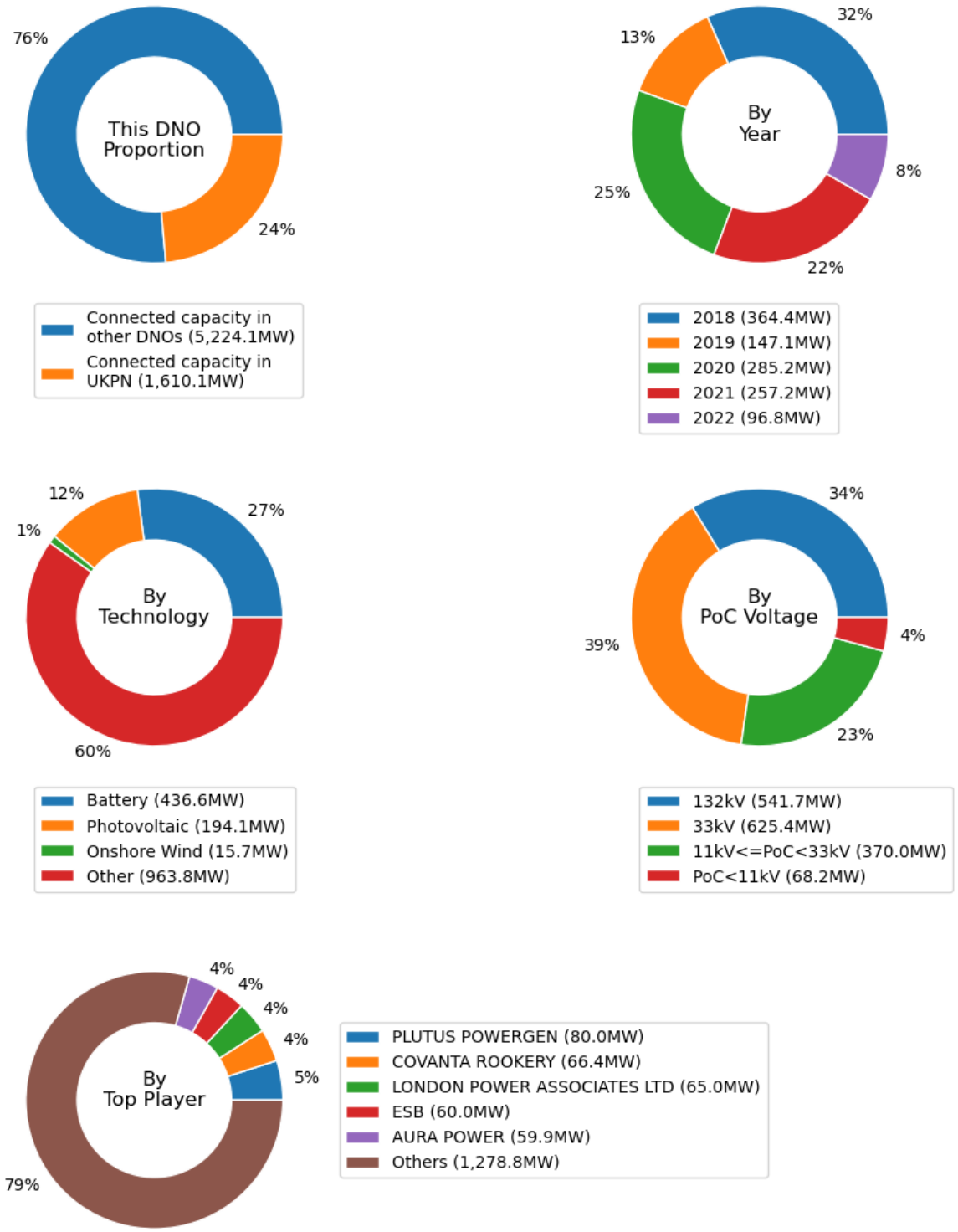
Connected capacity by year: the market reached a trough in 2019 with 147.1MW declining from 364.4MW in 2018 and recovered to 257.2MW in 2021 and dropped again to 96.8MW in 2022.

Connected capacity by technology: the connected capacity utilising battery storage technology was nearly 437MW taking 27% of the market share, followed by photovoltaic with 194.1MW and 12% market share. Onshore wind had been installed 15.7MW sharing 1% of the market. The rest 60% of the market was shared by other technologies.

Connected capacity by PoC voltage: 39% the offers had been connected to 33kV with 625.4MW capacity, followed by the connections on 132kV with nearly 542MW capacity and 34% market share. Voltage levels between 11kV (incl.) and 33kV (excl.) had digested 23% of the capacity and the rest 4% had been connected to a voltage below 11kV.

Top Players: Plutus Powergen led the market in UKPN with 80MW connected offers taking 5% market share, followed by other four top players with connected capacity between 60MW and 70 MW counting approximately 4% market share each.

Figure 7-5: Connected Capacity (2018-2022) by Year, Technology, Voltage and Top Players



Technology by Year: Market Share of Photovoltaic and Battery Storage Reached Their Highs in 2019

Figure 7-6: Yearly connected offers of various technologies since 2018

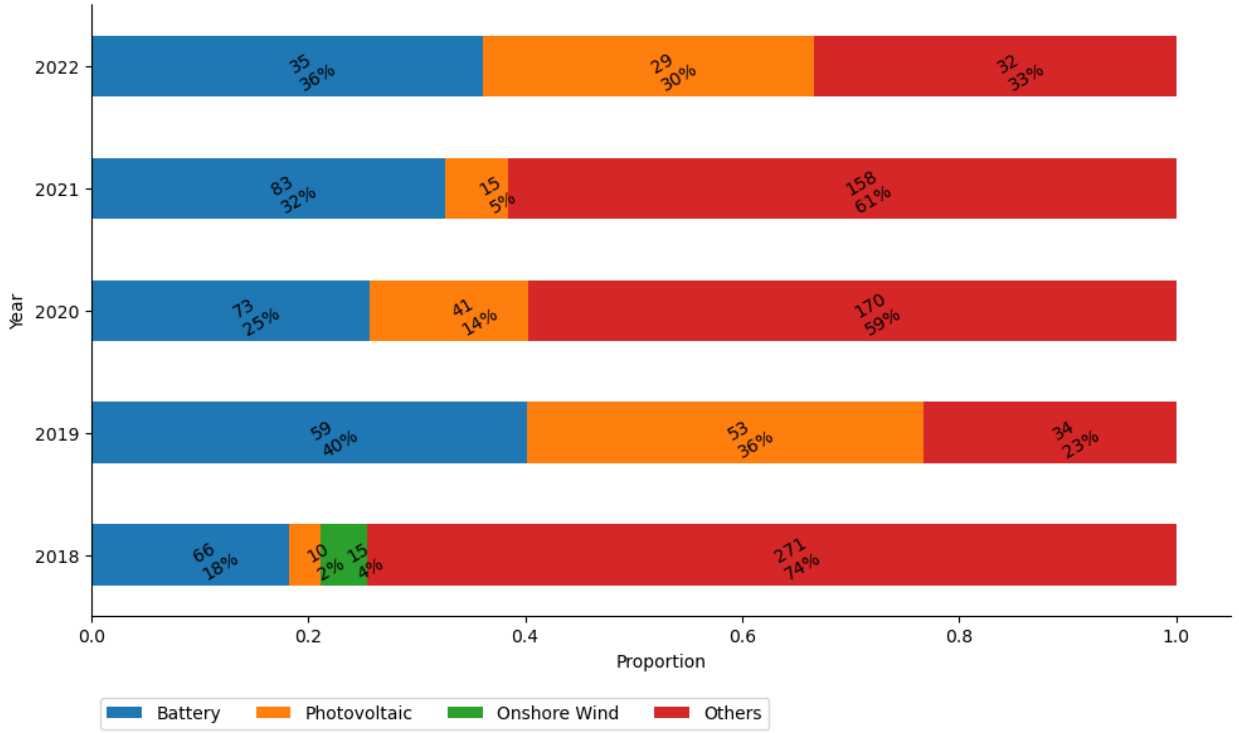


Figure 7-6 shows the yearly connected capacity and market proportion for various technologies since 2017 in UKPN. The market shares of photovoltaic reached its high in 2019 with 53MW (36% market share). Battery storage reached its high in 2021 with 83MW (32% market share). Battery storage capacity dropped to 35MW, 36% market share in 2022 after the peak. Photovoltaic capacity kept decreasing from 53MW, 36% market share in 2019 to 41MW, 14% in 2020 and 15MW, 5% in 2021 and recovered to 39MW, 30%. Onshore wind connections were only 15MW capacity and took 4% market share in 2018. The rest of the market was taken by "other" technologies counting more than half of the market share in all years except for 2019 and 2022.

PoC Voltage by Technology: 33kV Led the Connections of Photovoltaic and Onshore Wind

We show the capacity at various PoC voltage levels of connected offers for different technologies in **Figure 7-7**. 33kV dominated the connections for photovoltaic and onshore wind sites. 125MW photovoltaic capacity had been connected to 33kV, counting 64% of the total photovoltaic capacity. All the 15MW onshore wind capacity had been connected to 33kV. 239MW battery storage capacity had been connected to 132kV counting 54% of the total battery storage capacity followed by 182MW on 33kV sharing 41%.

Figure 7-7: PoC voltage of connected offers by technology

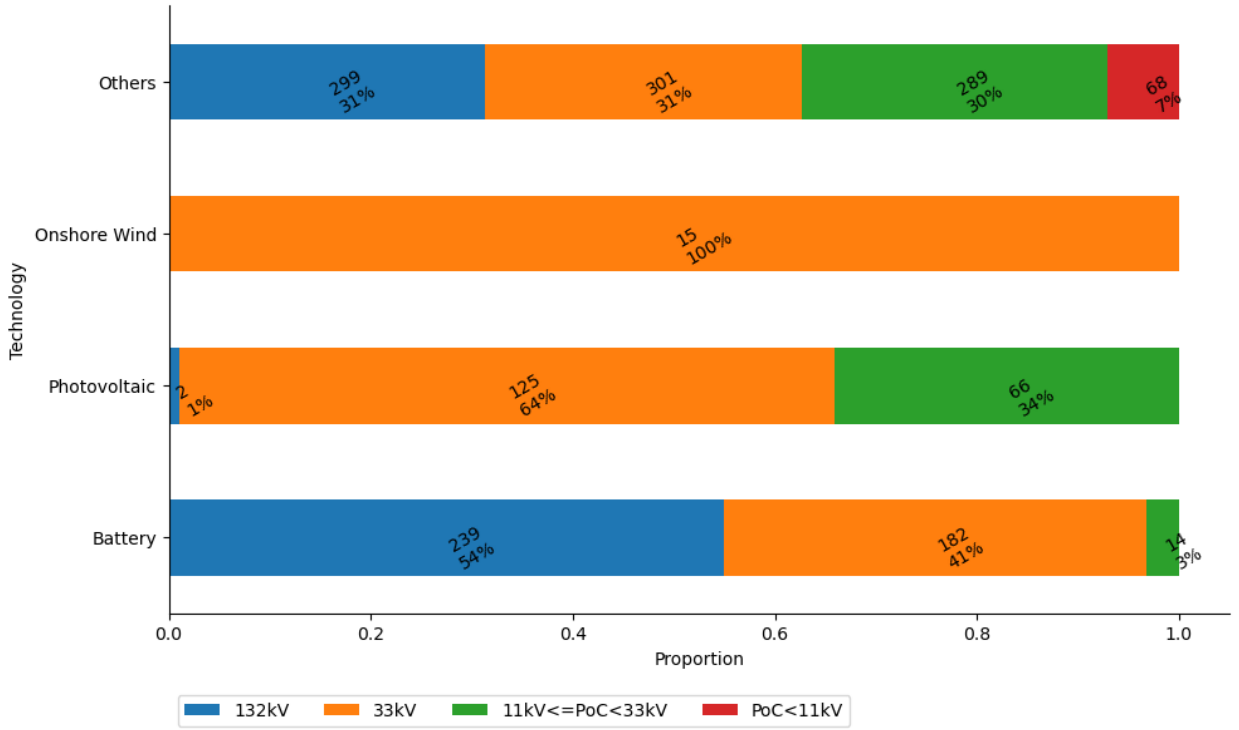
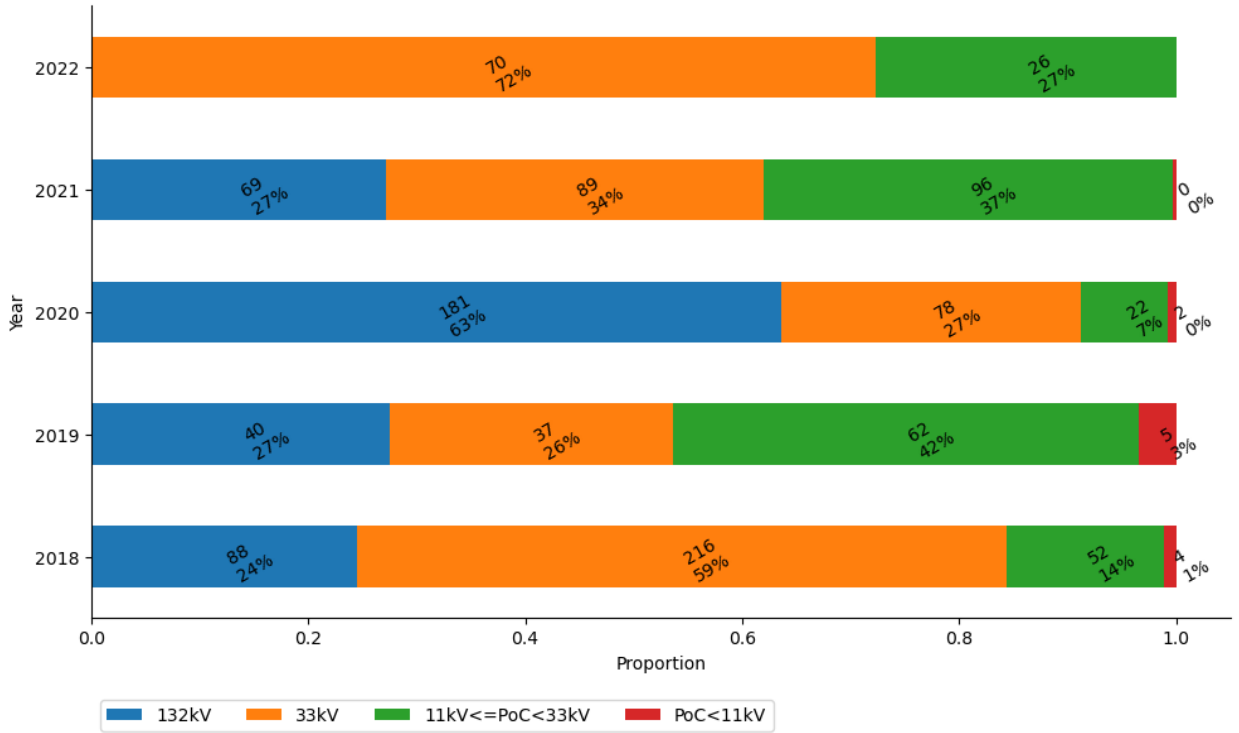


Figure 7-8: PoC voltage of connected offers by year



PoC Voltage by Year: 132kV and 33kV Connected More than Half of the Total Capacity

Figure 7-8 shows the capacity and market share for different PoC voltage levels of connected offers by year since 2018. The capacity connected to 132kV peaked in 2020 with 181MW, 63% market share increased from 88MW, 24% in 2018 and followed by a drop to 69MW, 27% in 2021. 33kV also played a significant role in connections, with a peak of 216MW, 59% market share in 2018 and 70MW, 72% in 2022. The connected capacity on voltage levels below 11kV had shrunk from 4MW in 2018 to 0MW in 2022.

Top Players in Each Technology Area

Aura Power led battery storage, AEE Renewables dominated photovoltaic

Table 7-3 presents the top 5 players in each technology area with their connected capacity (MW) and market share. Aura Power led the battery storage market with 59.9MW capacity counting 13.7% of the battery storage market. AEE Renewables held 40MW photovoltaic offers with 20.6% market share, ranking at the top in the photovoltaic market. Energie Park UK NR GMBH & CO. KG dominates the onshore wind market in UKPN with 9.5MW capacity connected.

Table 7-3: Top players of connected offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	AURA POWER [59.9, 13.7%]	AEE RENEWABLES PLC [40.0, 20.6%]	ENERGIEPARK UK NR GMBH & CO. KG [9.5, 60.7%]	PLUTUS POWERGEN [80.0, 8.3%]
2	ATON ENERGY; STRATERA ENERGY LIMITED [50.0, 11.5%]	LIGHTSOURCE [35.0, 18.0%]	TCI RENEWABLES [6.2, 39.3%]	COVANTA ROOKERY [66.4, 6.9%]
3	BLUEBELL ENERGY [49.9, 11.4%]	SOLARFIELDS LTD [20.0, 10.3%]	-	LONDON POWER ASSOCIATES LTD [65.0, 6.7%]
4	GREEN FROG [40.0, 9.2%]	ANESCO [16.5, 8.5%]	-	ESB [60.0, 6.2%]
5	ASTRA VENTURES LTD [35.0, 8.0%]	THE ABBEY GROUP [15.0, 7.7%]	-	CENTRICA [48.5, 5.0%]
Total	**[284.8, 65.2%]**	**[126.5, 65.2%]**	**[15.7, 100.0%]**	**[319.9, 33.2%]**

The top 5 players in battery storage took approximately 65.2% of the market with about 284.8MW connected capacity. 126.5MW photovoltaic connected capacity was held by the top 5 players counting 65.2% market share.

Top Players by Year

Top players held more than half of the connected capacity

Table 7-4 shows the top players by connected capacity in each year since 2018. Centrica was the top player in 2018 with 48.5MW, 13.3% market share, surpassed by AEE Renewables in 2019 with 40MW capacity and 27.2% market share. Convanta Rookery led the market in 2020 with 66.4MW capacity and 23.3%

market share. Aura Power took the champion in 2021 by 49.9MW and 19.4% market share. Astra Ventrures ranked top in 2022 with 35MW capacity and 36.1% market share.

Totally, top 5 players had always controlled more than half of the market in UKPN with a peak in 2019 with 87%.

Table 7-4: Top players of connected offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	CENTRICA [48.5, 13.3%]	AEE RENEWABLES PLC; GREEN FROG [40.0, 27.2%]	COVANTA ROOKERY [66.4, 23.3%]	AURA POWER [49.9, 19.4%]	ASTRA VENTURES LTD [35.0, 36.1%]
2	BWSC EAST ANGLIA LIMITED [48.0, 13.2%]	CONRAD [12.0, 8.2%]	LONDON POWER ASSOCIATES LTD [65.0, 22.8%]	WELSH POWER [48.0, 18.7%]	SOLARFIELDS LTD [20.0, 20.7%]
3	PLUTUS POWERGEN [40.0, 11.0%]	AGR; SOLAR INC LTD [10.0, 6.8%]	ATON ENERGY [50.0, 17.5%]	RETHINK ENERGY LIMITED [34.0, 13.2%]	AGR [15.0, 15.5%]
4	BESS [30.3, 8.3%]	PORT OF TILLBURY LONDON LTD [9.0, 6.1%]	LIGHTSOURCE [35.0, 12.3%]	SUN CREDIT [22.0, 8.6%]	AMP [10.1, 10.5%]
5	LOW CARBON ALLIANCE [20.0, 5.5%]	HBS GROUP SOUTHERN LTD [7.0, 4.8%]	AMP [14.0, 4.9%]	PEAKGEN POWER LTD [20.0, 7.8%]	CONRAD [7.2, 7.4%]
Total	**[186.8, 51.2%]**	**[128.0, 87.0%]**	**[230.4, 80.8%]**	**[173.9, 67.6%]**	**[87.3, 90.2%]**

Connected Offers (2018-2022) in Northern Powergrid (NPG)

- NPG, counting 17% of the total DNO market with 1.1GW connected capacity, had followed a down trend of the connected capacity from 207.2MW in 2018 to 82.6MW in 2020 with a slight recovery to nearly 179.8MW in 2021.
- We saw the connected capacity had been dominated by "other" technologies except for 2020 when battery storage dominated the connections.
- Connections in NPG had scattered on various voltage levels from 132kV to 11kV and below for different technologies but mainly dominated by 132kV, 66kV and 33kV.
- Top 5 players owned most of the capacity in all years and fully controlled the market in battery and onshore wind technologies.

Connected Offers by Year, Technology, Voltage and Top Players

Figure 7-9 shows the analysis of the proportion of connected capacity in NPG versus other DNOs and connected capacity by year, technology, voltage and top players.

NPG vs Other DNOs: the total connected capacity in NPG was around 1.1GW taking 17% of the total market versus a total of approximately 5.7GW in other DNOs.

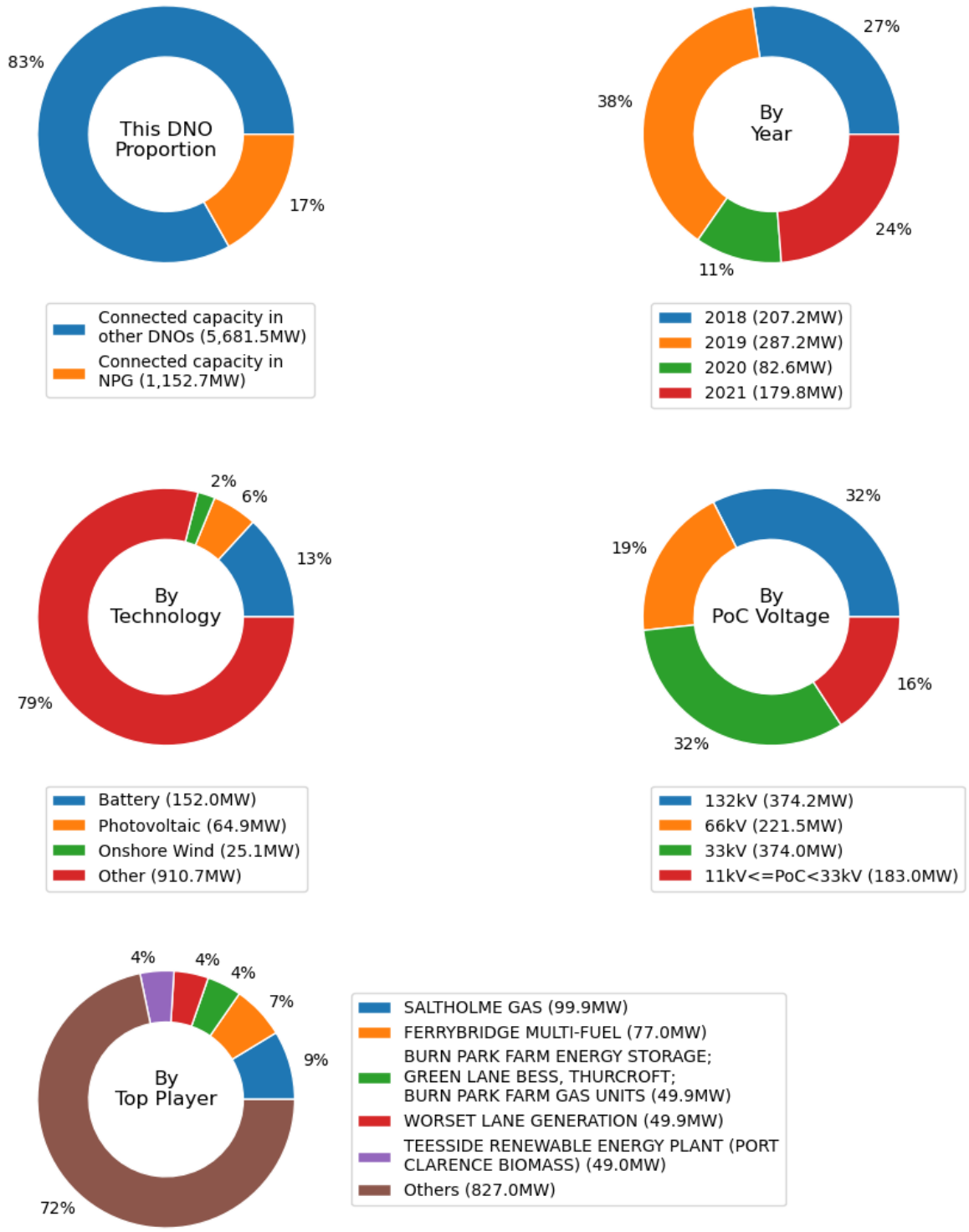
Connected capacity by year: the market reached a trough in 2020 with 82.6MW declining from 207.2MW in 2018 and recovered to 179.8MW in 2021.

Connected capacity by technology: the connected capacity utilising battery storage was 152MW taking 13% of the market share, followed by photovoltaic with 64.9MW and 6% market share. Onshore wind had been installed 25.1MW sharing 2% of the market. The rest 79% of the market was shared by other technologies.

Connected capacity by PoC voltage: 132kV and 33kV were the main voltage levels for connections in NPG, with 374.2MW and 374MW connected capacity, respectively and taking approximately 32% market share each. 183MW capacity had been connected to a voltage level between 11kV (incl.) and 33kV (excl.) with 16% market share, following 66kV connecting 221.5MW capacity.

Top Players: Saltholme Gas led the market in NPG by nearly 100MW connected offers taking 9% market share, followed by Ferrybridge Multi-fuel with 77MW capacity and 7% market share. Other players ranked within top 5 held around 50MW connected capacity and 4-5% market share each.

Figure 7-9: Connected Capacity (2018-2022) by Year, Technology, Voltage and Top Players



Technology by Year: The Market in NPG was Led by "Other" Technologies

Figure 7-10: Yearly connected offers of various technologies since 2018

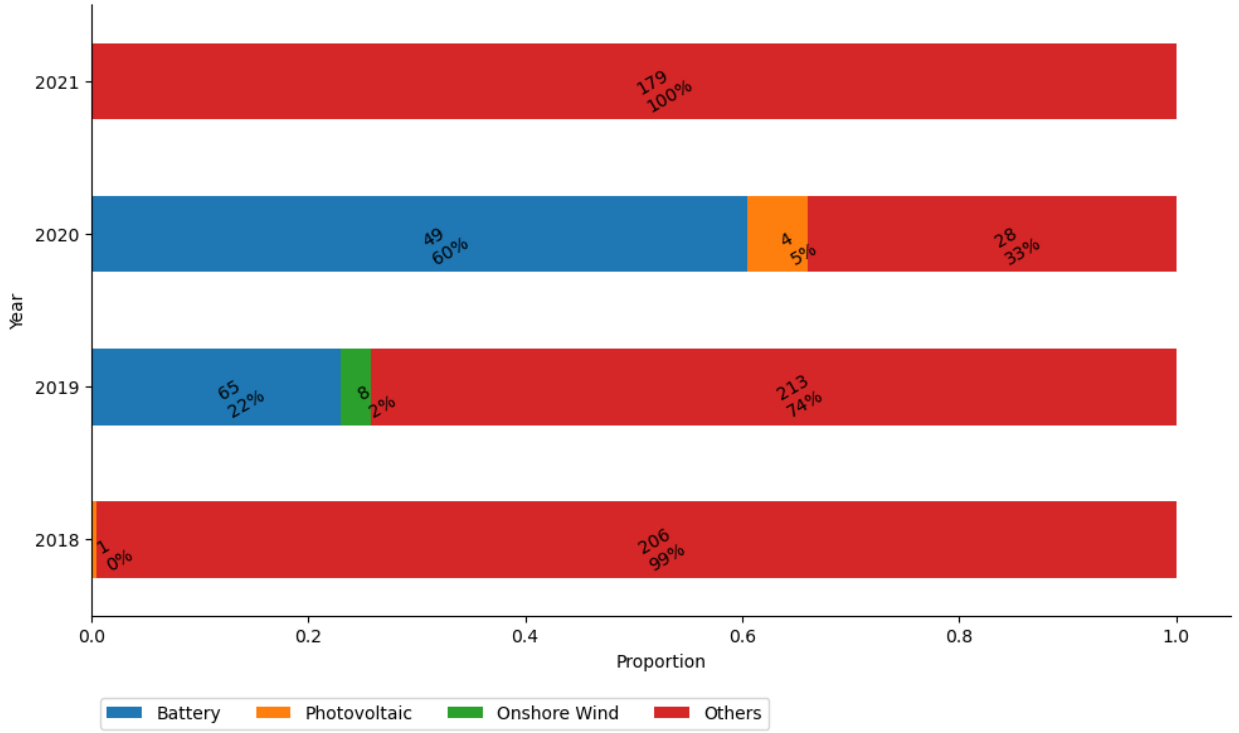


Figure 7-10 shows the yearly connected capacity and market proportion for various technologies since 2018 in NPG. "Other" technologies dominated the market in all years except for 2020. Battery storage sites had been connected in 2019 and 2020 with 65MW and 49MW capacity, respectively. 8MW onshore wind capacity had been connected in 2019 sharing 2% of the market. 4MW photovoltaic capacity has been connected in 2020 with 5% market share.

PoC Voltage by Technology: Connections Scattered on Various Voltage Levels

We show the capacity at various PoC voltage levels of connected offers for different technologies in **Figure 7-11**. 132kV and 66kV digested 49MW battery storage capacity each and shared 32% of the total battery storage capacity each, followed by the 45MW capacity connected to 33kV. Photovoltaic connections mainly happened on voltage levels between 11kV (incl.) and 33kV (excl.) with 56MW capacity and 87% share of the total photovoltaic capacity. 33kV had dominated the connections for onshore wind sites with 16MW capacity and 67% market share. Other technologies were mainly connected to 132kV with 324MW capacity and 33kV with 304MW capacity.

Figure 7-11: PoC voltage of connected offers by technology

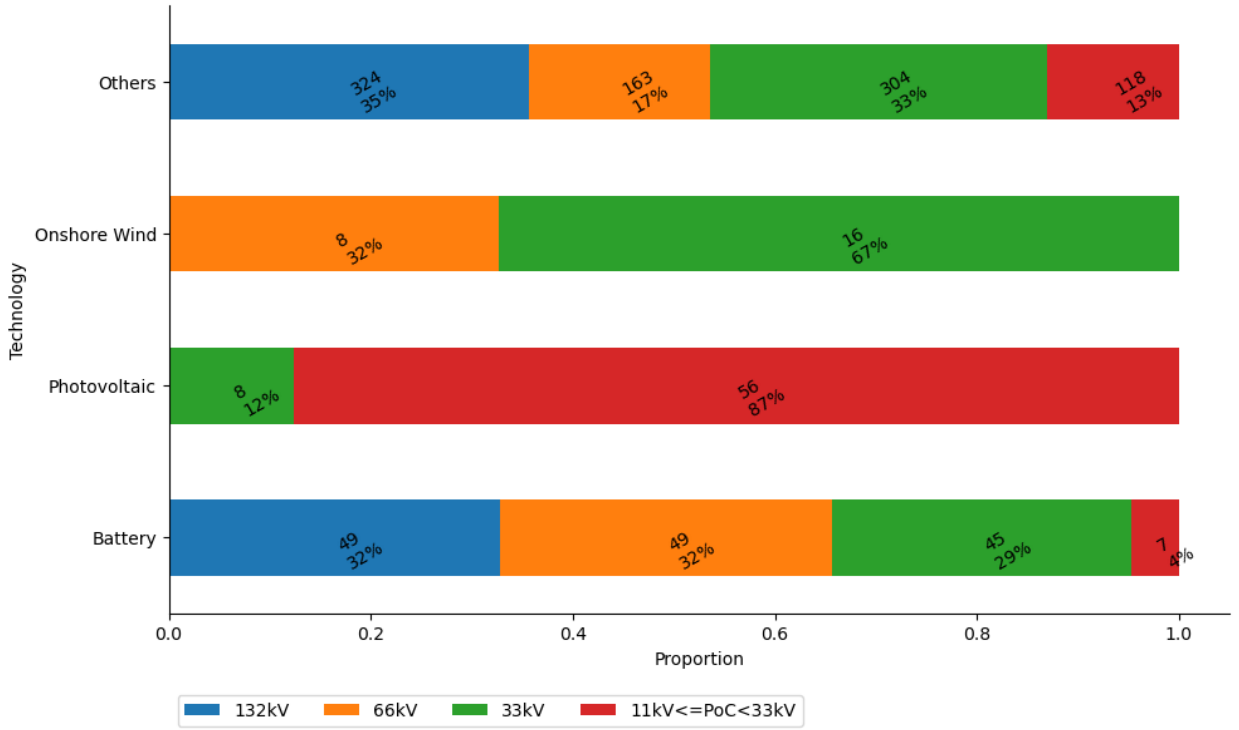
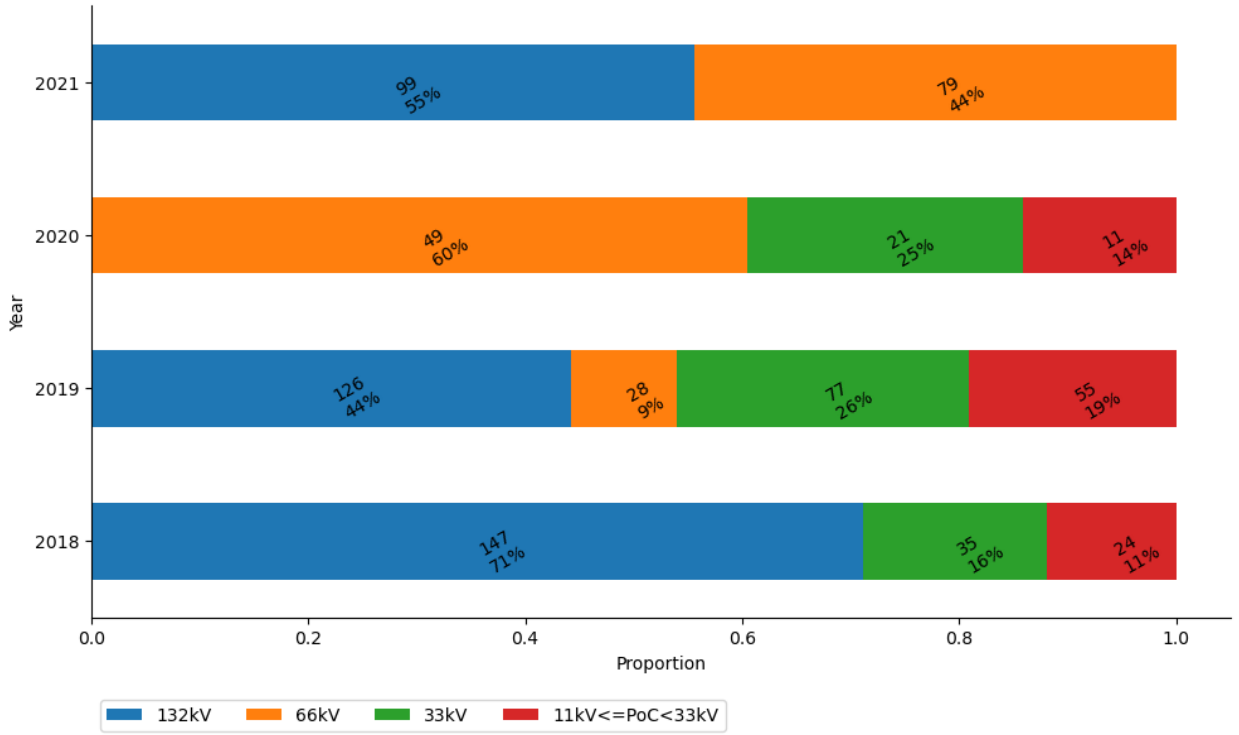


Figure 7-12: PoC voltage of connected offers by year



PoC Voltage by Year: 132kV and 66kV Dominated the Connections

Figure 7-12 shows the capacity and market share for different PoC voltage levels of connected offers by year since 2018. 132kV led the connections in 2018, 2019 and 2021 with 147MW, 126MW and 99MW capacity, counting 71%, 44% and 55% market share, respectively. The market was dominated by 66kV with 49MW and 60% market share in 2020.

Top Players in Each Technology Area

Burn Park Farm Energy Storage and Gren Lane Been, Thurcroft led battery storage, Solar Farm and Battery dominated photovoltaic and Moor House Wind Farm led onshore wind

Table 7-5 presents the top 5 players in each technology area with their connected capacity (MW) and market share. Burn Park Farm Energy Storage and Gren Lane Been, Thurcroft led the battery storage market with 49.9MW capacity counting 32.8% of the battery storage market each. Solar Farm and Battery held 16.2MW photovoltaic offers with 25% market share, ranking at the top in the photovoltaic market. Moor House Wind Farm was the largest player (49% market share) in the area of onshore wind technology with 12.3MW connected capacity.

Table 7-5: Top players of connected offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BURN PARK FARM ENERGY STORAGE; GREEN LANE BESS, THURCROFT [49.9, 32.8%]	SOLAR FARM AND BATTERY [16.2, 25.0%]	MOOR HOUSE WIND FARM [12.3, 49.0%]	SALTHOLME GAS [99.9, 11.0%]
2	PORT OF TYNE BESS [35.0, 23.0%]	BROOM CLOSE AND AINDERBY HOUSE	WITHERNWICK WIND FARM [8.2, 32.7%]	FERRYBRIDGE MULTI-FUEL [77.0, 8.5%]
3	BALBY CARR BANK [10.0, 6.6%]	LACEBY SOLAR FARM [8.0, 12.3%]	GIBSON LANE WIND FARM [4.6, 18.3%]	BURN PARK FARM GAS UNITS [49.9, 5.5%]
4	CLEVELAND POTASH [6.0, 3.9%]	HUNGER HILL FARM SOLAR GENERATION; SAND HUTTON SOLAR	-	WORSET LANE GENERATION [49.9, 5.5%]
5	THRYBERGH WEIR [1.2, 0.8%]	UNIPRES PV [4.6, 7.1%]	-	TEESSIDE RENEWABLE ENERGY PLANT (PORT CLARENCE BIOMASS) [49.0,
Total	**[152.0, 100.0%]**	**[48.1, 74.1%]**	**[25.1, 100.0%]**	**[325.7, 35.8%]**

The top 5 players in battery storage took all of the market with about 152MW connected capacity. 48.1MW photovoltaic connected capacity was held by the top 5 players counting 74.1% market share. The top 5 players owned all the onshore wind sites with 25.1MW capacity.

Top Players by Year

Top players owned most of the capacity in all years

Table 7-6 shows the top players by connected capacity in each year since 2018. Burn Park Farm Gas Units led the market in 2018 with 49.9MW, 24.1% market

share. Ferrybridge Multi-Fuel ranked top in 2019 with 77MW capacity and 26.8% market share. Green Lane Bess, Thurcroft led the market in 2020 with 49.9MW capacity and 60.4% market share. Saltholme Gas took the champion in 2021 by 99.9MW and 55.6% market share.

Totally, the top 5 players owned most of the capacity in all years. The market share of the top players had grown over the several years util taking 100% of the market in 2020 and 2021 by 82.6MW and 179.8MW capacity, respectively.

Table 7-6: Top players of connected offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	BURN PARK FARM GAS UNITS [49.9, 24.1%]	FERRYBRIDGE MULTI-FUEL [77.0, 26.8%]	GREEN LANE BESS, THURCROFT [49.9, 60.4%]	SALTHOLME GAS [99.9, 55.6%]	-
2	TEESSIDE RENEWABLE ENERGY PLANT (PORT CLARENCE BIOMASS) [49.0, 23.6%]	BURN PARK FARM ENERGY STORAGE [49.9, 17.4%]	HULL ENERGY CENTRE [21.0, 25.4%]	WORSET LANE GENERATION [49.9, 27.8%]	-
3	SCAWBY BROOK EXPANSION [48.5,	BALBY CARR BANK [30.0, 10.4%]	2 X 2.5MW SYNCH CHP, ARLA FOODS,	CAXTON WAY GAS [30.0, 16.7%]	-
4	GASCOIGNE WOOD (GASCGOINE WOOD SS)	BOSCAR GRANGE HYBRID GENERATION [27.0, 9.4%]	UNIPRES PV [4.6, 5.6%]	-	-
5	CHESTERFIELD ROAD GENERATION [8.0, 3.9%]	CHESTERFIELD ROAD LARGE GENERATION [20.0, 7.0%]	OTLEY ROAD CHP [2.1, 2.5%]	-	-
Total	**[190.4, 91.9%]**	**[203.9, 71.0%]**	**[82.6, 100.0%]**	**[179.8, 100.0%]**	**-**

Connected Offers (2018-2022) in Electricity North West (ENW)

- ENW, counting 13% of the total DNO market with 856.1MW connected capacity, had followed a down trend of the connected capacity from 310.6MW in 2018 to 18MW in 2022.
- We saw “other” technologies dominated the market in all years except for 2022.
- In ENW, the 33kV voltage level had led the connections of battery storage and onshore wind and the 33kV voltage level had dominated the whole connection market in all years except 2018.
- The connections had been dominated by the top 5 players, with 100% market share in onshore wind and more than half of the battery and photovoltaic market.

Connected Offers by Year, Technology, Voltage and Top Players

Figure 7-13 shows the analysis of the proportion of connected capacity in ENW versus other DNOs and connected capacity by year, technology, voltage and top players.

ENW vs Other DNOs: the total connected capacity in ENW was around 856.1MW taking 13% of the total market versus a total of approximately 6GW in other DNOs.

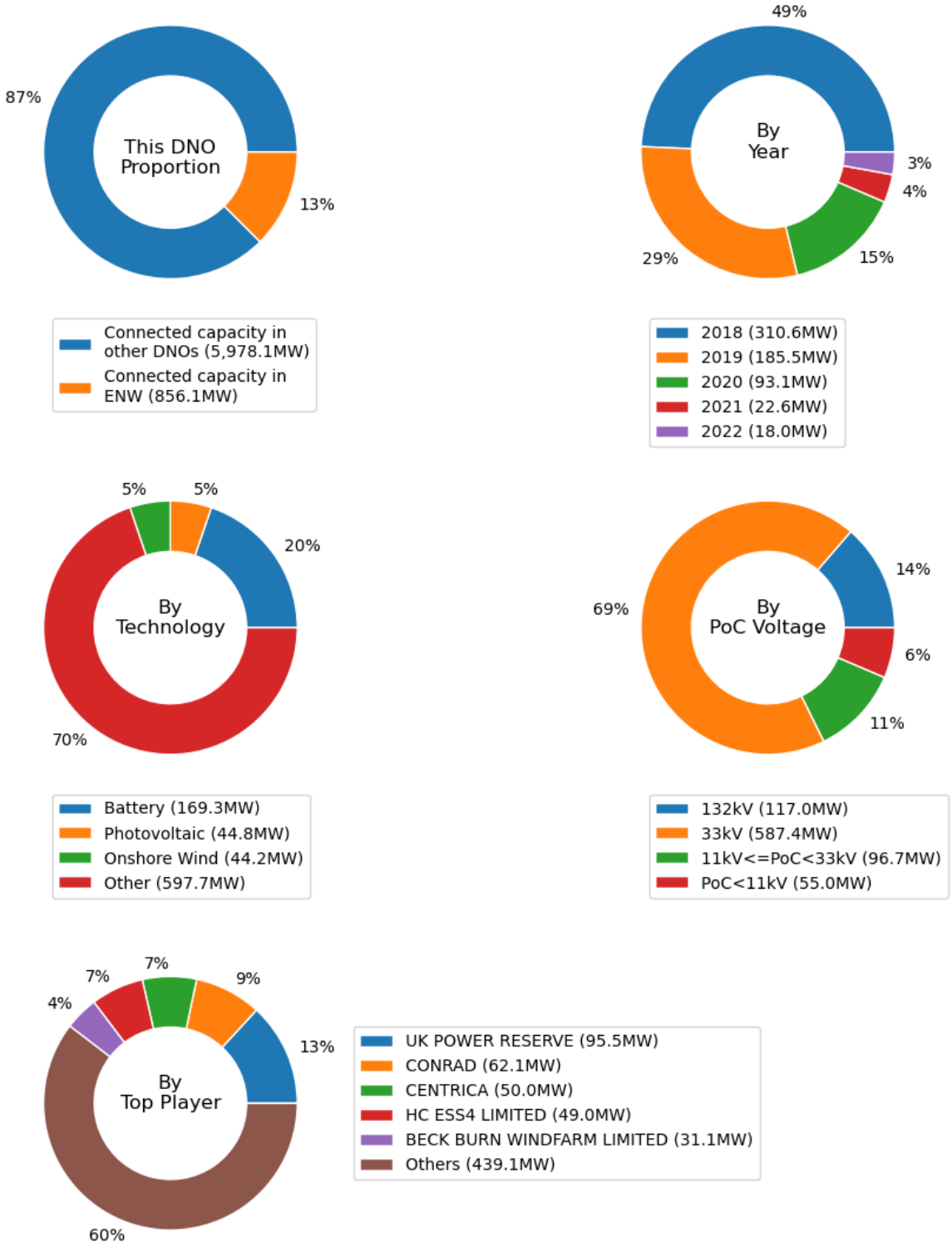
Connected capacity by year: the market reached a peak in 2018 with 310.6MW and decreased to less than 100MW in 2020, 2021 and 2022.

Connected capacity by technology: the connected capacity utilising battery storage technology was 169.3MW taking 20% of the market share. Photovoltaic sites had been energised 44.8MW sharing 5% of the market closely followed by onshore wind with 44.2MW and 5% market share. The rest 70% of the market was shared by other technologies.

Connected capacity by PoC voltage: most of the offers had been connected to 33kV with 587.4MW capacity and 69% market share, followed by the connections on 132kV with 117MW and 14% market share. Connections between 11kV (incl.) and 33kV (excl.) were 96.7MW with 11% market share, followed by the connections on voltage below 11kV with 55MW and 6% market share.

Top Players: UK Power Reserve led the market in ENW by 95.5MW connected offers taking 13% market share, followed by Conrad with 62.1MW and 9% market share. Centrica and HC ESS4 connected 50MW and 49MW respectively counting 7% market share each. Beck Burn Windfarm was the fifth top player in ENW with 31.1MW capacity and 4% market share.

Figure 7-13: Connected Capacity (2018-2022) by Year, Technology, Voltage and Top Players



Technology by Year: "Other" Technologies Dominated the Market in All Years Except for 2022

Figure 7-14: Yearly connected offers of various technologies since 2018

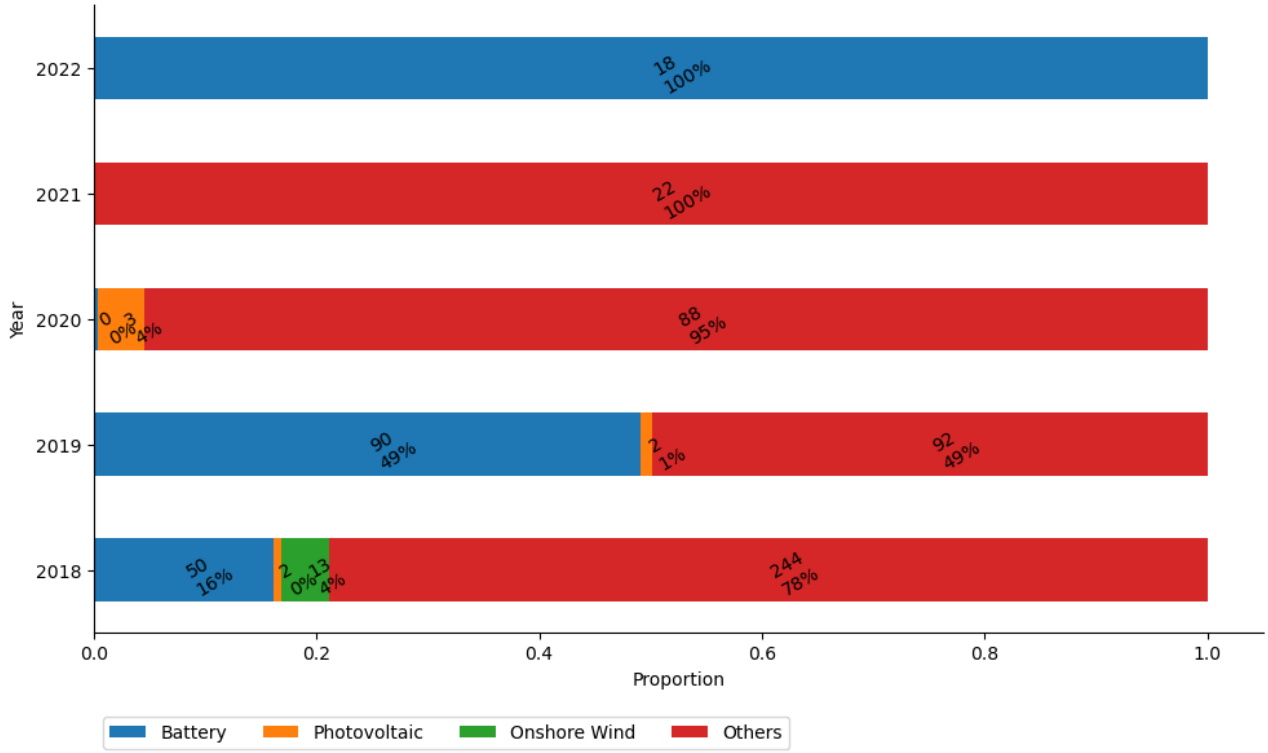


Figure 7-14 shows the yearly connected capacity and market proportion for various technologies since 2018 in ENW. "Other" technologies had dominated the market in all years except for 2022. Battery storage connections had seen a rising trend from 50MW, 16% in 2018 market share to 90MW, 49% market share in 2019 but disappeared from 2020 and 2021, followed by 18MW capacity in 2022. Photovoltaic had been played a minor role in all years. 13MW onshore wind had been connected with 4% market share in 2018.

PoC Voltage by Technology: 33kV Led the Connections of Battery Storage and Onshore Wind

We show the capacity at various PoC voltage levels of connected offers for different technologies in Figure 7-15. 117MW battery storage capacity had been connected to 33kV in ENW counting 69% of the total capacity. The rest capacity of battery storage sites had been connected to 132kV. 33kV provided connections to all onshore wind sites with 44MW capacity. Photovoltaic sites were mainly connected to voltage levels between 11kV (incl.) and 33kV (excl.) with 24MW, 53% market share followed by the 14MW capacity being connected to 132kV.

Figure 7-15: PoC voltage of connected offers by technology

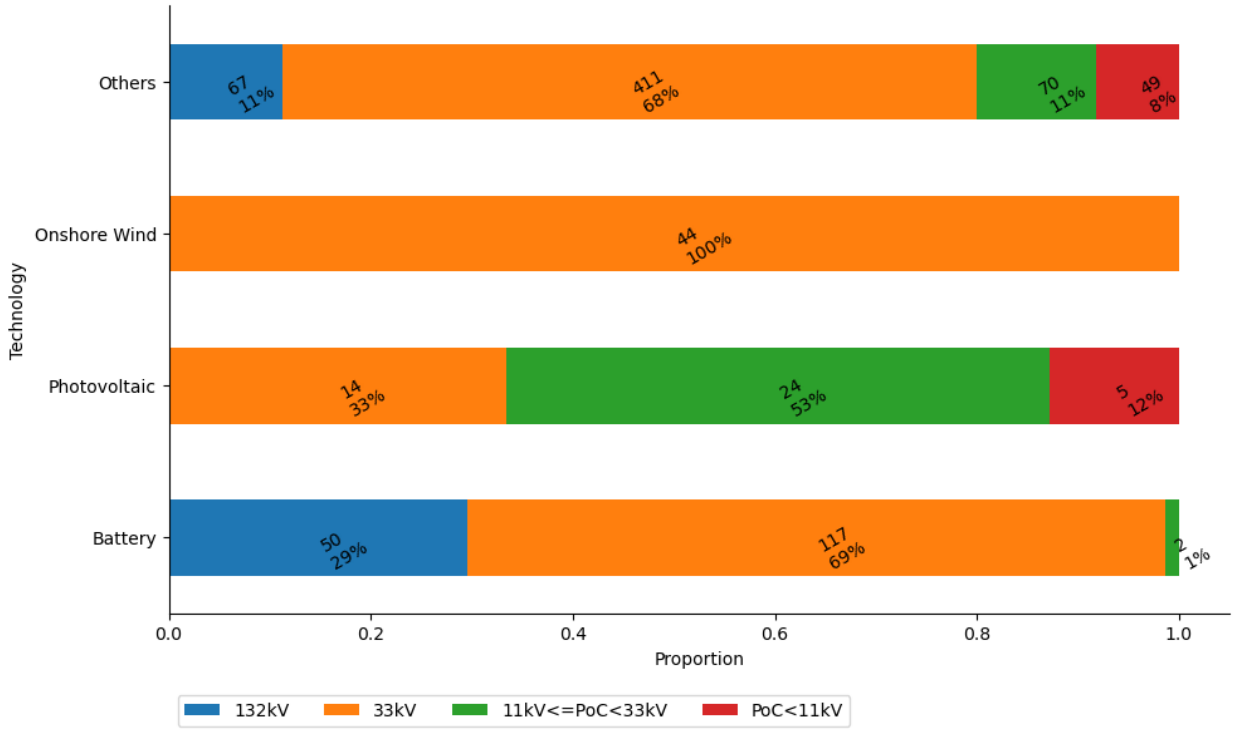
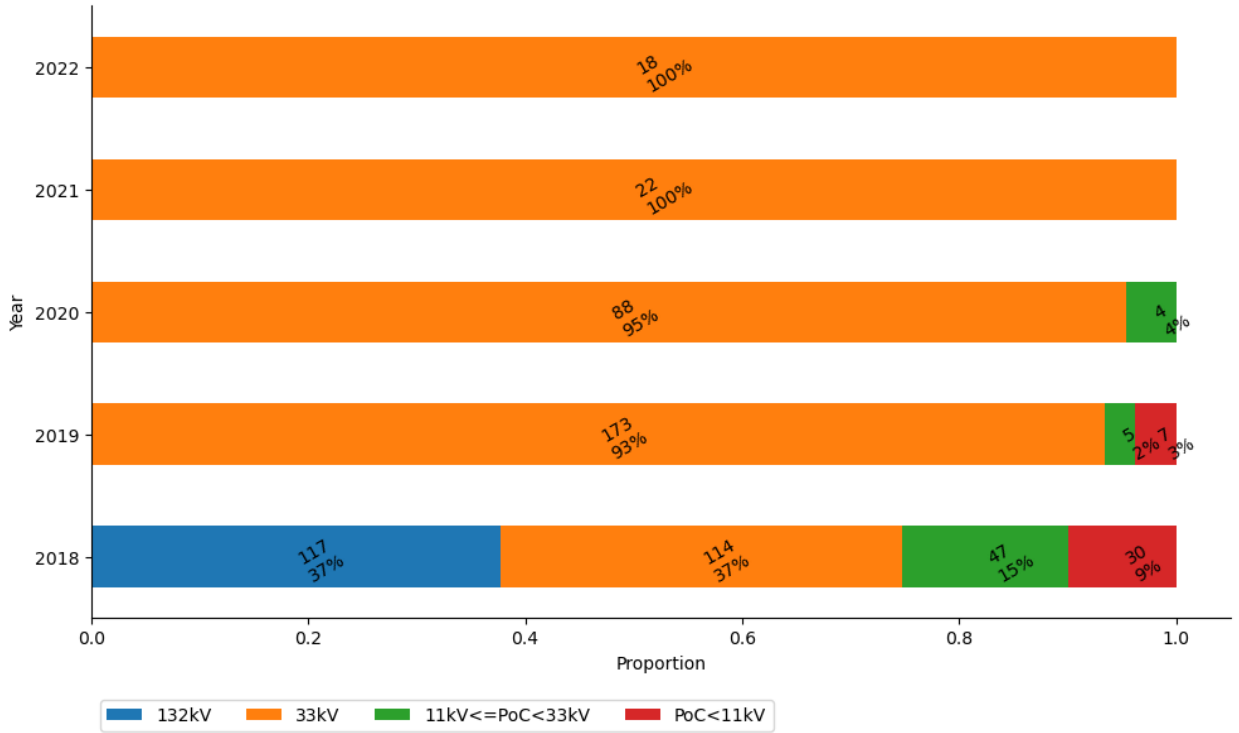


Figure 7-16: PoC voltage of connected offers by year



PoC Voltage by Year: 33kV Dominated the Connections in All Years except for 2018

Figure 7-16 shows the capacity and market share for different PoC voltage levels of connected offers by year since 2018. 33kV connections had dominated the market with more than 70% market share in all years except for 2018 when 117MW connections had been connected to 132kV closely followed by the 114MW connected to 33kV.

Top Players in Each Technology Area

Centrica led battery storage, United Utilities dominated photovoltaic and Beck Burn Windfarm led onshore wind

Table 7-7 presents the top 5 players in each technology area with their connected capacity (MW) and market share. Centrica led the battery storage market with 50MW capacity counting 33.5% of the battery storage market. United Utilities held 6.3MW photovoltaic offers with 14% market share, ranking at the top in the photovoltaic market. Beck Burn Windfarm was the largest player (70.2% market share) in the area of onshore wind technology with 31.1MW connected capacity.

Table 7-7: Top players of connected offers in each technology area

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	CENTRICA [50.0, 33.5%]	UNITED UTILITIES [6.3, 14.0%]	BECK BURN WINDFARM LIMITED [31.1, 70.2%]	UK POWER RESERVE [95.5, 19.6%]
2	HC ESS4 LIMITED [49.0, 32.8%]	BILSBORROW SOLAR PROJECT LIMITED [5.0, 11.1%]	HALLBURN FARM LTD [13.2, 29.8%]	CONRAD [62.1, 12.7%]
3	MARK HENSOR [20.0, 13.4%]	WREAY SOLAR LIMITED [5.0, 11.1%]	-	TGC [30.0, 6.1%]
4	ARL [18.0, 12.1%]	WREA GREEN SOLAR LIMITED [5.0, 11.1%]	-	MOORFIELD GENERATION [21.2, 4.3%]
5	CLEATOR BATTERY STORAGE LIMITED [10.0, 6.7%]	GSII CLAY CROSS LIMITED [4.2, 9.4%]	-	BANCROFT GENERATION LIMITED [21.1, 4.3%]
Total	**[147.0, 98.4%]**	**[25.4, 56.7%]**	**[44.2, 100.0%]**	**[229.8, 47.1%]**

The top 5 players in battery storage took 98.4% of the market with about 147MW connected capacity. 25.4W photovoltaic connected capacity was held by the top 5 players counting 56.7% market share. The top 5 players in onshore wind sites hold more than 44MW capacity with all the market share.

Top Players by Year

Top players took more than half of the market share in all years

Table 7-8 shows the top players by connected capacity in each year since 2018. Centrica led the market in 2018 with 50MW, 22.5% market share. Hcess4 ranked top in 2019 with 49MW capacity and 33.9% market share. Conrad led the market

in 2020 with 62.1MW capacity and 67% market share. Hillhouse Generation took the champion in 2021 by 20MW and 88.5% market share. ARL was the only developer having connected capacity in ENW in 2022.

Totally, the markets share of the top 5 players had increased from 62.5% to 100% from 2018 to 2020 and kept 100% in 2021 and 2022.

Table 7-8: Top players of connected offers by year

Top Player/Year	2018	2019	2020	2021	2022
1	CENTRICA [50.0, 22.5%]	HC ESS4 LIMITED [49.0, 33.9%]	CONRAD [62.1, 66.7%]	HILLHOUSE GENERATION LIMITED [20.0, 88.5%]	ARL [18.0, 100.0%]
2	TGC [30.0, 13.5%]	BANCROFT GENERATION LIMITED [21.1, 14.6%]	BIOGAS TECHNOLOGY LIMITED [21.1, 22.6%]	ALDERLEY PARK LIMITED [2.6, 11.5%]	-
3	MOORFIELD GENERATION [21.2, 9.5%]	CHADDERTON GENERATION LIMITED; PIMBO GENERATION	VITAL ENERGI [5.7, 6.1%]	-	-
4	MY POWER UK [20.3, 9.1%]	MARK HENSOR [20.0, 13.9%]	UNITED UTILITIES [3.9, 4.2%]	-	-
5	UK POWER RESERVE [17.5, 7.9%]	SHOVEL READY [7.0, 4.8%]	TELEDATA UK LTD [0.4, 0.4%]	-	-
Total	**[139.0, 62.5%]**	**[139.2, 96.4%]**	**[93.1, 100.0%]**	**[22.6, 100.0%]**	**[18.0, 100.0%]**

Chapter 8. Conclusions

This report presented a detailed data analysis of the UK distribution grid capacity and generation market. We compared the accepted capacity and the connected capacity, showed their trend over the recent years across technologies, PoC voltages and top players from DNO grid level, individual DNO level and individual licence area level. Our analysis provided useful reference information for different participants in this radical energy revolution shifting from traditional fuels to environmentally friendly resources.

The Message to DNOs

Reinforcement and Flexibility are Required to Solve the Increasing Need for Connection of Accepted Capacity, Especially for Battery Storage and Photovoltaic

The compound annual growth rate (CAGR) of accepted capacity in DNOs for battery storage is as high of 278.3% from 2020 to 2022 contributing 77.7% of the total growth (**Figure 3-5**) of all accepted offers. The total accepted capacity of battery storage was 1,743MW in 2020 (**Figure 3-5**) and reached approximately 25GW and surpassed the capacity of photovoltaic (**Figure 4-6**) in 2022. By comparison, the connection of battery storage capacity was only 186MW in 2022 (**Figure 5-2**), pushing the ratio of accepted over connected capacity to more than 300x (**Figure 2-1**). Similar overstock of acceptance happened in photovoltaic with a CAGR of 29.8% from 2021 to 2022, reaching nearly 13GW in 2022 and contributing 17.4% of the total growth (**Figure 3-5**) of all accepted offers. But the connections of photovoltaic was only 164MW in 2022 (**Figure 5-2**) resulting in the yearly accepted/ connected ratio over 50x (**Figure 2-1**). To catch up with the boosting trend of accepted capacity and plan ahead to make sure these offers to be connected and energised in time has become an urgent issue to all DNOs.

132kV will Lead the Connections in the Near Future Rather Than 33kV in the Past

From the PoC voltage perspective, 132kV has been leading the market in accepted offers from 2018 (**Figure 4-8**) and contributing 59% of the total capacity (**Figure 4-1**). However, the connections have focused on 33kV over the similar period (**Figure 5-4**) sharing nearly half of the market (**Figure 5-1**). This mismatch informs the DNOs that the grid should be prepared to adapt to the situation with more integrated capacity at a higher voltage level than it was before.

The Message to Developers

Be Aware of the Overstocked Capacity of Battery Storage and Photovoltaic in NGED

Leading the accepted offers in battery storage and photovoltaic (**Figure 4-2**), NGED has contributed almost half of the total growth in accepted capacity (**Figure 3-4**) with the lowest Overdue Ratio (**Table 3-1**). This shows NGED has experienced a high volume of acceptance along with the highest efficiency of delivering connections in recent years. However, the pressure is coming to NGED since most of its offers were accepted in 2021 and 2022 (**Figure 3-3**) without seeing significant increase in connection capacity in 2021 (**Figure 7-1**), leading to its C/A Ratio being the lowest one among DNOs (**Figure 3-2**). When submit a connection offer application, developers should bear in mind that a high volume of accepted capacity is waiting to be connected in NGED and a lower C/A Ratio in this DNO indicates a higher probability of delay for an offer to be connected.

UKPN Shows the Potential to Have Faster Connection Speed for Battery Storage and Photovoltaic

Compared to NGED, UKPN might be a good choice for now to submit an offer for battery storage and photovoltaic sites. Firstly, UKPN contributed approximately 20% of the total growth of the accepted offers between 2020 and 2022 (**Figure 3-4**) showing their capability of integrating more power capacity and their strong positions in the market. Secondly, UKNP has a strong momentum of accepting battery storage and photovoltaic offers since 2019 (**Figure 6-10**) without capacity being so overwhelmed in 2021 and 2022 compared to NGED (**Table 3-1**). Thirdly, UKPN's C/A ratio is above the industry average (**Figure 3-2**) indicating its strong ability to deliver connections without delay.

SSE and SPEN Deserve More Attention from the Onshore Wind Developers

For those seeking opportunities of onshore wind development, SSE and SPEN deserve more attention. SSE and SPEN are the two largest DNOs in terms of accepted capacity of onshore wind (**Figure 4-2**). They have allocated 16% and 23% of their total accepted capacity to onshore wind technology compared to a percentage of no more than 5% at all other DNOs (**Figure 4-3**), meaning that onshore wind offers are more welcomed in these two DNOs than others. On the other hand, the growth of the accepted capacity of onshore wind, with a CAGR of 43.5%, contributed only 2.8% of the total growth of the accepted capacity (**Figure 3-5**) meaning that the onshore wind market is stably growing. We expect a stably growing onshore wind market will follow its current trend and pattern in the near future: being more acceptable in SSE and SPEN as they were before.

The Message to Investors

Where to Invest Which Technology

Investors looking to invest shovel-ready projects may pay more attention on battery storage technology since its accepted capacity has dramatically increased in recent years (Figure 4-6) with a CAGR of 278.3% from 2020 to 2022 (Figure 3-5), and photovoltaic technology due to its leading market share in almost all years since 2018 (Figure 4-6). The accepted offers of battery storage and photovoltaic are dominated by NGED followed by UKPN, SSE and NPG (Figure 4-2). For those looking for onshore wind investment opportunities, SSE, SPEN and NGED are the top 3 DNOs holding most of the onshore wind capacity (Figure 4-2).

PoC Voltage: 132kV Projects Lead the Market Followed by 33kV

The PoC voltage may affect the revenue stream of a project. Investors are suggested to be aware of the accepted capacity being dominated by 132kV with a strong rising trend (Figure 4-8), especially in the photovoltaic and battery storage markets (Figure 4-7). 33kV is another voltage level seeing an upward trend in accepted capacity (Figure 4-8) mainly constructed with offers from photovoltaic, battery storage and onshore wind technologies.

Size Matters When Invest

More than half of the accepted capacities are from sites with capacity below 50MW (Figure 4-4) dominating almost all PoC voltage levels (Figure 4-5). This means that most of the investment opportunities will appear on the sites below 50MW. The investors prepare to invest large stations (>100MW) should look for opportunities in NGED, UKPN and NPG which are the three DNOs dominated the large station market (Figure 4-4). Large stations may highly be connected to a 132kV voltage level (Figure 4-5).

Top Players Information for Investors

Shown in Table 4-1, battery storage market is led by Bluestone Energy with 19.6% market share, photovoltaic by Low Carbon (4.6%) and onshore wind by TNEI (8.0%). Low Carbon holds most accepted capacity in 2020 and 2021, but surpassed by Bluestone Energy in 2022 (Table 4-2).

More detailed top players information has been listed in tables by technologies and by accepted years in Chapter 4 to Chapter 7 and the detailed site information for those top players are listed in tables in appendices A-F in Chapter 9.

Chapter 9. Appendix

Appendix A: Top Players of Accepted Offers at Distribution Grid Level

Table 9-1: Details of top players of accepted offers at distribution grid level

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers
BLUESTONE ENERGY	Photovoltaic	40.0	33	12/06/2021	LE15 8RU	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	25.0	33	12/05/2021	TR16 5UN	NGED	South West England	1
BLUESTONE ENERGY	Battery	98.0	132	29/12/2021	CV2 1NQ	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	49.9	132	23/03/2022	B92 0DT	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	09/03/2022	NG13 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	49.9	132	05/05/2022	NG13 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	98.0	132	04/08/2022	B76 0BJ	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	30.0	132	16/09/2022	LE8 0QS	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	3.5	33	06/10/2022	LE15 8RU	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	1.1	11	18/10/2022	SA67 8DE	NGED	South Wales	1
BLUESTONE ENERGY	Photovoltaic	42.8	66	06/04/2021	DL13 5AW	NPG	North East England	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	FK3 3NP	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA4 8AN	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA2 7BY	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	49.0	33	TBC	PA14 5DN	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Photovoltaic	38.7	33	TBC	PA3 3AG	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA3 3DP	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA2 8UE	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	ML5 4RL	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	150.0	TBC	30/09/2021	SN12 8LW	SSE	Southern England	1
BLUESTONE ENERGY	Photovoltaic	45.0	TBC	18/07/2022	SN12 8NW	SSE	Southern England	1
BLUESTONE ENERGY	Battery	28.0	33	29/06/2020	RM14 3TD	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	98.0	132	10/11/2021	CM6 3NJ	UKPN	East England	1
BLUESTONE ENERGY	Battery	40.0	132	14/10/2021	RM14 3JD	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	7.0	33	20/06/2022	CM3 8HS	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	18/10/2022	NR4 6TQ	UKPN	East England	1
BLUESTONE ENERGY	Battery	93.1	132	07/01/2022	KT21 2BU	UKPN	South East England	1
BLUESTONE ENERGY	Photovoltaic	6.0	11	15/11/2022	PL26 7AG	NGED	South West England	1
BLUESTONE ENERGY	Photovoltaic	49.0	132	15/11/2022	CM77 6SN	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	49.0	132	15/11/2022	CM6 3JU	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	25.0	33	15/11/2022	B92 0DJ	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	98.0	132	15/11/2022	DN36 5SG	NPG	Yorkshire	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	40.0	132	15/11/2022	M14 3TQ	UKPN	East England	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	B91 2TH	NGED	West Midlands	1
BLUESTONE ENERGY	Battery	248.0	132	15/11/2022	LN5 0BY	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA3 1HU	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	50.0	33	15/11/2022	PA3 4DF	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA2 8BJ	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	FK4 1SN	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA2 7DA	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Photovoltaic	46.0	132	15/11/2022	NP18 1HU	NGED	South Wales	1
BLUESTONE ENERGY	Photovoltaic	7.0	11	15/11/2022	CM3 8EB	UKPN	East England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	G3 8YW	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Photovoltaic	4.0	33	15/11/2022	G3 8YW	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	BH22 0NF	SSE	Southern England	1

Table 9-2: Details of top players of accepted offers at distribution grid level (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	KT10 7LH	UKPN	South East England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	G74 4GY	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	KT15 3PS	UKPN	South East England	1
BLUESTONE ENERGY	Photovoltaic	4.0	11	15/11/2022	PA11 3RN	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Photovoltaic	50.0	33	15/11/2022	G23 5HD	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	ME3 8QQ	UKPN	South East England	1
BLUESTONE ENERGY	Battery	150.0	132	15/11/2022	WA7 4XT	SPEN	North Wales, Merseyside anc	1
BLUESTONE ENERGY	Photovoltaic	4.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	30.0	33	15/11/2022	LE8 0QT	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	30.0	33	15/11/2022	LE8 0QT	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	60.0	11	15/11/2022	G72 9UL	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CR4 4HU	UKPN	London	1
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	EH17 8SB	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	TN33 9BN	UKPN	South East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CR4 4HU	UKPN	London	1
BLUESTONE ENERGY	Photovoltaic	38.0	132	15/11/2022	CB2 5BP	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	180.0	132	15/11/2022	DN36 5SG	NPG	Yorkshire	1
BLUESTONE ENERGY	Photovoltaic	1.0	11	15/11/2022	ML3 0EG	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DN37 7AL	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	33	15/11/2022	NG33 4AB	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	HU8 8DG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	NE16 3BJ	NPG	North East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	RM14 3PH	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	SK15 3BY	ENW	North West England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	FK2 0YG	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S61 4QH	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	50.0	33	15/11/2022	SK14 4NL	ENW	North West England	1
BLUESTONE ENERGY	Battery	40.0	33	15/11/2022	LL68 9DW	SPEN	North Wales, Merseyside anc	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DE14 3DP	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DE14 3DP	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	NG8 6AL	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S9 1BG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S9 1BG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	SK8 5QA	ENW	North West England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CV4 8LG	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	MK41 0EW	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	LS14 1NG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	49.0	33	15/11/2022	LS14 1NG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	49.0	33	15/11/2022	CV4 8LG	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	49.0	33	15/11/2022	NG15 0DR	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	B92 0DX	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	20.0	132	15/11/2022	B92 0DX	NGED	West Midlands	1
DNO CONSULTING	Photovoltaic	40.0	132	16/01/2020	ST18 9BU	NGED	West Midlands	2
DNO CONSULTING	Photovoltaic	20.0	33	24/03/2020	CF38 1SL	NGED	South Wales	2
DNO CONSULTING	Photovoltaic	26.0	66	26/05/2020	CV37 8LB	NGED	West Midlands	2
DNO CONSULTING	Photovoltaic	40.0	132	01/06/2020	GL2 7EF	NGED	West Midlands	2
DNO CONSULTING	Photovoltaic	20.0	0.4	29/10/2021	TA7 8QL	NGED	South West England	2
DNO CONSULTING	Battery	50.0	132	06/04/2022	EX5 1LA	NGED	South West England	2
DNO CONSULTING	Battery	99.9	132	09/08/2022	WV4 4XN	NGED	West Midlands	2
DNO CONSULTING	Battery	49.9	132	31/10/2022	EX5 2TG	NGED	South West England	2
DNO CONSULTING	Battery	49.9	11	20/10/2022	B38 9EB	NGED	West Midlands	2
DNO CONSULTING	Battery	99.9	132	01/12/2022	WS7 0LE	NGED	West Midlands	2
DNO CONSULTING	Photovoltaic	40.0	TBC	05/03/2014	SO51 6DQ	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	32.6	TBC	11/07/2019	DT8 3HS	SSE	Southern England	2
DNO CONSULTING	Others	125.2	TBC	28/05/2019	SL6 3SS	SSE	Southern England	2
DNO CONSULTING	Others	105.2	33	04/03/2020	SN12 7QG	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	35.0	33	28/11/2017	AB42 3EN	SSE	North Scotland	2
DNO CONSULTING	Photovoltaic	9.9	33	24/09/2019	PH2 9LX	SSE	North Scotland	2
DNO CONSULTING	Photovoltaic	9.9	33	24/09/2019	PH2 9LN	SSE	North Scotland	2

Table 9-3: Details of top players of accepted offers at distribution grid level (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers
DNO CONSULTING	Photovoltaic	12.6	11	17/01/2020	RG2 9JX	SSE	Southern England	2
DNO CONSULTING	Others	35.5	11	28/11/2017	BA13 4WD	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	20.0	TBC	21/12/2020	DT2 0EB	SSE	Southern England	2
DNO CONSULTING	Others	35.5	TBC	TBC	BA13 4WD	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	6.8	11	TBC	RG23 7EA	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	40.0	TBC	TBC	BA14 6PL	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	50.0	11	TBC	BH23 6BB	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	20.0	11	01/09/2021	RG27 0LE	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	20.0	11	09/09/2021	OX12 8JA	SSE	Southern England	2
DNO CONSULTING	Battery	8.6	11	03/11/2021	SP3 5RP	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	15.0	11	09/12/2021	PO22 9UP	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	30.0	TBC	02/12/2021	SO21 2QU	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	12.0	33	22/02/2022	SP7 9LD	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	40.0	TBC	08/04/2022	SO51 6DQ	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	35.0	TBC	18/03/2022	AB42 3EN	SSE	North Scotland	2
DNO CONSULTING	Photovoltaic	40.0	TBC	06/05/2022	IV30 8LX	SSE	North Scotland	2
DNO CONSULTING	Photovoltaic	99.8	TBC	06/05/2022	IV30 8NQ	SSE	North Scotland	2
DNO CONSULTING	Photovoltaic	99.8	TBC	24/02/2022	OX9 2NR	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	3.5	11	04/05/2022	PO22 9UP	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	12.0	11	10/06/2022	SO51 9AG	SSE	Southern England	2
DNO CONSULTING	Battery	42.0	TBC	15/09/2022	RG26 5AT	SSE	Southern England	2
DNO CONSULTING	Battery	30.0	TBC	18/09/2022	PH2 9LN	SSE	North Scotland	2
DNO CONSULTING	Photovoltaic	12.0	11	13/11/2022	SO40 7DX	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	30.0	TBC	19/11/2022	SO21 2QU	SSE	Southern England	2
DNO CONSULTING	Photovoltaic	50.0	132	07/03/2019	SG9 0JB	UKPN	East England	2
DNO CONSULTING	Photovoltaic	40.0	132	16/11/2018	HP22 5AX	UKPN	East England	2
DNO CONSULTING	Others	99.9	132	04/06/2019	CM19 5JY	UKPN	East England	2
DNO CONSULTING	Photovoltaic	15.0	33	10/02/2020	NR20 3EW	UKPN	East England	2
DNO CONSULTING	Battery	99.8	132	11/02/2021	SS11 8UA	UKPN	East England	2
LOW CARBON	Photovoltaic	20.0	33	11/06/2019	NN13 5QG	NGED	East Midlands	3
LOW CARBON	Photovoltaic	20.0	33	24/05/2019	S43 3YH	NGED	East Midlands	3
LOW CARBON	Photovoltaic	40.0	33	02/10/2019	CV47 2SL	NGED	East Midlands	3
LOW CARBON	Photovoltaic	20.0	33	18/12/2019	CF62 3BJ	NGED	South Wales	3
LOW CARBON	Photovoltaic	14.3	33	22/01/2020	MK18 2JW	NGED	East Midlands	3
LOW CARBON	Photovoltaic	35.0	33	13/10/2020	LE10 3EE	NGED	East Midlands	3
LOW CARBON	Battery	35.0	132	07/01/2021	GL13 9ED	NGED	West Midlands	3
LOW CARBON	Photovoltaic	23.0	33	14/05/2021	WV7 3AT	NGED	West Midlands	3
LOW CARBON	Photovoltaic	30.0	33	28/06/2021	S43 3YH	NGED	East Midlands	3
LOW CARBON	Photovoltaic	50.0	33	21/10/2021	NG32 2DF	NGED	East Midlands	3
LOW CARBON	Photovoltaic	35.0	33	01/10/2021	EX15 2PJ	NGED	South West England	3
LOW CARBON	Photovoltaic	49.9	132	13/09/2022	WR9 0PX	NGED	West Midlands	3
LOW CARBON	Photovoltaic	19.0	33	03/08/2022	NG34 8NR	NGED	East Midlands	3
LOW CARBON	Photovoltaic	9.9	33	02/09/2022	CV34 4BB	NGED	East Midlands	3
LOW CARBON	Photovoltaic	30.0	33	27/09/2022	NG12 5PU	NGED	East Midlands	3
LOW CARBON	Photovoltaic	50.0	TBC	10/09/2019	OX44 7LF	SSE	Southern England	3
LOW CARBON	Photovoltaic	15.0	11	23/04/2019	OX25 1NX	SSE	Southern England	3
LOW CARBON	Photovoltaic	20.0	TBC	11/09/2020	SP8 5JG	SSE	Southern England	3
LOW CARBON	Photovoltaic	45.5	TBC	25/09/2020	OX27 0AD	SSE	Southern England	3
LOW CARBON	Photovoltaic	15.0	TBC	09/10/2020	TBC	SSE	Southern England	3
LOW CARBON	Photovoltaic	50.0	TBC	27/10/2020	BA11 6QQ	SSE	Southern England	3
LOW CARBON	Photovoltaic	20.0	TBC	07/12/2020	OX9 7BT	SSE	Southern England	3
LOW CARBON	Photovoltaic	9.8	11	TBC	SP5 4NR	SSE	Southern England	3
LOW CARBON	Photovoltaic	10.0	11	TBC	SP5 4NR	SSE	Southern England	3
LOW CARBON	Photovoltaic	100.0	TBC	04/08/2021	SN12 7QQ	SSE	Southern England	3
LOW CARBON	Photovoltaic	100.0	TBC	14/10/2022	SN12 7QB	SSE	Southern England	3
LOW CARBON	Photovoltaic	15.0	33	13/08/2019	CM3 4AS	UKPN	East England	3
LOW CARBON	Photovoltaic	1.7	11	29/10/2019	AL10 9TX	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	20/12/2019	CM6 2QY	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	17/02/2020	CM9 6GT	UKPN	East England	3
LOW CARBON	Photovoltaic	49.9	132	09/04/2020	CM23 1BJ	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	29/04/2020	CO16 0HN	UKPN	East England	3

Table 9-4: Details of top players of accepted offers at distribution grid level (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers
LOW CARBON	Photovoltaic	35.0	33	09/04/2020	CM77 8DS	UKPN	East England	3
LOW CARBON	Photovoltaic	49.9	132	12/06/2020	CM2 8UN	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	132	18/09/2020	CM6 2QY	UKPN	East England	3
LOW CARBON	Photovoltaic	35.0	33	21/08/2020	IP13 9AD	UKPN	East England	3
LOW CARBON	Photovoltaic	30.0	33	10/11/2020	HP27 9QX	UKPN	East England	3
LOW CARBON	Photovoltaic	70.0	132	14/08/2020	CO2 0EJ	UKPN	East England	3
LOW CARBON	Photovoltaic	50.0	33	26/03/2021	PE32 2LW	UKPN	East England	3
LOW CARBON	Photovoltaic	12.0	33	11/03/2021	CB11 3JT	UKPN	East England	3
LOW CARBON	Photovoltaic	35.0	33	30/06/2021	CM19 5HE	UKPN	East England	3
LOW CARBON	Photovoltaic	25.0	33	25/05/2021	CM16 7QQ	UKPN	East England	3
LOW CARBON	Photovoltaic	40.0	132	26/07/2021	SS4 3LT	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	30/06/2021	IP14 5BL	UKPN	East England	3
LOW CARBON	Photovoltaic	35.0	132	07/06/2021	CO7 7SN	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	19/07/2021	HP5 3PD	UKPN	East England	3
LOW CARBON	Battery	5.0	33	12/08/2021	CM2 7RY	UKPN	East England	3
LOW CARBON	Photovoltaic	30.0	33	12/01/2022	HP22 5AX	UKPN	East England	3
LOW CARBON	Photovoltaic	37.0	33	23/02/2022	HP27 9QX	UKPN	East England	3
LOW CARBON	Photovoltaic	10.0	33	28/02/2022	IP13 9AD	UKPN	East England	3
LOW CARBON	Photovoltaic	10.0	33	16/05/2022	CM13 3SG	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	21/04/2022	PE19 6XG	UKPN	East England	3
LOW CARBON	Photovoltaic	35.0	33	08/08/2022	CM16 6PW	UKPN	East England	3
LOW CARBON	Photovoltaic	70.0	132	03/08/2022	SG8 7SH	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	07/07/2022	SG8 0NT	UKPN	East England	3
LOW CARBON	Photovoltaic	40.0	33	22/06/2022	MK43 0QQ	UKPN	East England	3
LOW CARBON	Photovoltaic	12.0	33	02/09/2022	CB10 2SU	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	14/10/2021	RH13 8DX	UKPN	South East England	3
LOW CARBON	Photovoltaic	14.0	33	22/12/2021	RH13 8DL	UKPN	South East England	3
PATHFINDER CLEAN ENERGY	Photovoltaic	49.8	132	13/10/2021	SY8 4LE	NGED	West Midlands	4
PATHFINDER CLEAN ENERGY	Photovoltaic	40.0	132	21/03/2022	GL2 8LT	NGED	West Midlands	4
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	03/05/2022	TBC	NGED	West Midlands	4
PATHFINDER CLEAN ENERGY	Battery	18.5	33	01/02/2022	B79 0JU	NGED	East Midlands	4
PATHFINDER CLEAN ENERGY	Battery	119.6	132	13/07/2022	BS35 3SH	NGED	South West England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	TBC	NGED	South West England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	BS39 7SJ	NGED	South West England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	BA3 4DX	NGED	South West England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	30.0	33	14/10/2022	LE18 3TJ	NGED	East Midlands	4
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	20/10/2022	LE9 4LE	NGED	East Midlands	4
PATHFINDER CLEAN ENERGY	Photovoltaic	199.8	132	16/09/2022	NG11 0JY	NGED	East Midlands	4
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	22/11/2022	DY7 5AR	NGED	West Midlands	4
PATHFINDER CLEAN ENERGY	Photovoltaic	199.8	132	18/11/2022	B78 2EU	NGED	East Midlands	4
PATHFINDER CLEAN ENERGY	Photovoltaic	79.8	132	28/10/2022	CF5 6EZ	NGED	South Wales	4
PATHFINDER CLEAN ENERGY	Photovoltaic	15.0	33	05/04/2020	NR10 3BX	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	15.0	33	02/11/2020	IP21 4QS	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	69.0	132	24/08/2020	MK41 6AB	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	18.0	132	11/09/2020	NR10 3AG	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	16/10/2020	NR9 5DT	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	40.0	33	11/09/2020	SG7 5RH	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	48.0	132	02/03/2021	IP22 1AZ	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	27.0	33	30/04/2021	IP19 0RJ	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	49.8	132	31/08/2021	PE28 0AW	UKPN	East England	4
PATHFINDER CLEAN ENERGY	Photovoltaic	78.0	132	17/01/2022	PE13 4PL	UKPN	East England	4
CONRAD	Others	10.7	6.6	17/08/2020	WN3 4HH	ENW	North West England	5
CONRAD	Battery	24.2	33	16/05/2022	BB1 3ES	ENW	North West England	5
CONRAD	Others	9.1	11	21/05/2019	M24 1RU	ENW	North West England	5
CONRAD	Others	7.7	11	28/05/2019	OL8 2LZ	ENW	North West England	5
CONRAD	Others	12.7	11	24/10/2019	B76 1BE	NGED	West Midlands	5
CONRAD	Others	7.0	11	08/10/2019	NG24 3BY	NGED	East Midlands	5
CONRAD	Battery	7.2	11	31/03/2020	BS2 0TA	NGED	South West England	5
CONRAD	Others	14.4	11	20/10/2020	TA18 8LL	NGED	South West England	5
CONRAD	Photovoltaic	40.6	66	09/09/2020	HR1 4EP	NGED	West Midlands	5

Table 9-5: Details of top players of accepted offers at distribution grid level (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers
CONRAD	Others	7.2	11	12/01/2021	TA6 5LP	NGED	South West England	5
CONRAD	Battery	5.5	11	12/11/2020	EX14 4LG	NGED	South West England	5
CONRAD	Battery	22.0	33	19/03/2021	TQ2 8JJ	NGED	South West England	5
CONRAD	Others	5.0	11	02/03/2021	PL4 0SF	NGED	South West England	5
CONRAD	Battery	49.9	132	08/09/2021	TA6 6PQ	NGED	South West England	5
CONRAD	Others	6.0	11	17/06/2021	BA3 2AF	NGED	South West England	5
CONRAD	Battery	49.9	132	14/11/2021	PL12 6PU	NGED	South West England	5
CONRAD	Others	10.1	11	29/06/2021	B69 4RJ	NGED	West Midlands	5
CONRAD	Battery	15.4	33	24/12/2021	PL7 5AA	NGED	South West England	5
CONRAD	Battery	15.4	33	24/11/2021	TA23 0NA	NGED	South West England	5
CONRAD	Battery	49.9	132	11/03/2022	TA4 1EJ	NGED	South West England	5
CONRAD	Photovoltaic	49.9	132	23/02/2022	PL12 6PU	NGED	South West England	5
CONRAD	Battery	99.0	132	05/08/2022	ST9 0NB	NGED	West Midlands	5
CONRAD	Photovoltaic	17.2	33	22/03/2022	BS31 2TF	NGED	South West England	5
CONRAD	Battery	70.4	132	27/07/2022	WV10 7JZ	NGED	West Midlands	5
CONRAD	Photovoltaic	7.6	11	09/09/2022	LN6 9BT	NGED	East Midlands	5
CONRAD	Photovoltaic	5.0	11	12/08/2022	LN6 9BT	NGED	East Midlands	5
CONRAD	Battery	99.0	132	14/09/2022	CV8 1QB	NGED	East Midlands	5
CONRAD	Battery	99.0	132	07/11/2022	B65 9DS	NGED	West Midlands	5
CONRAD	Others	5.0	TBC	TBC	CH6 5EX	SPEN	North Wales, Merseyside anc	5
CONRAD	Others	5.0	11	21/11/2019	LL14 3LA	SPEN	North Wales, Merseyside anc	5
CONRAD	Others	5.0	11	TBC	LL14 9RG	SPEN	North Wales, Merseyside anc	5
CONRAD	Others	7.6	11	27/01/2020	SO31 5FS	SSE	Southern England	5
CONRAD	Others	7.6	11	20/06/2019	SN4 7SA	SSE	Southern England	5
CONRAD	Others	7.6	11	25/11/2020	SO50 6YU	SSE	Southern England	5
CONRAD	Others	7.6	11	TBC	BN18 0HX	SSE	Southern England	5
CONRAD	Photovoltaic	9.0	11	TBC	TBC	SSE	Southern England	5
CONRAD	Others	10.1	11	TBC	PO22 9GH	SSE	Southern England	5
CONRAD	Others	5.1	11	11/08/2021	PO13 0AF	SSE	Southern England	5
CONRAD	Photovoltaic	49.9	TBC	04/03/2022	PO17 5PQ	SSE	Southern England	5
CONRAD	Battery	49.9	TBC	10/03/2022	AB51 0XY	SSE	North Scotland	5
CONRAD	Photovoltaic	4.1	11	06/05/2022	BH23 6SE	SSE	Southern England	5
CONRAD	Battery	25.3	TBC	06/05/2022	SN12 8LT	SSE	Southern England	5
CONRAD	Others	7.6	11	07/08/2022	SO31 5FS	SSE	Southern England	5
CONRAD	Others	5.3	11	22/03/2022	PO9 1JW	SSE	Southern England	5
CONRAD	Photovoltaic	49.9	TBC	05/10/2022	GU34 3AB	SSE	Southern England	5
CONRAD	Others	7.0	TBC	12/11/2022	SO22 4BF	SSE	Southern England	5
CONRAD	Battery	99.0	TBC	15/11/2022	SO45 1DT	SSE	Southern England	5
CONRAD	Others	7.5	11	22/12/2017	PE7 2EX	UKPN	East England	5
CONRAD	Others	10.0	11	19/06/2019	CM12 9HR	UKPN	East England	5
CONRAD	Others	8.5	11	17/02/2020	CM2 7AE	UKPN	East England	5
CONRAD	Others	7.2	11	18/05/2020	IP19 8RX	UKPN	East England	5
CONRAD	Others	5.1	11	08/04/2021	CB9 8PB	UKPN	East England	5
CONRAD	Others	8.0	11	20/07/2021	NR3 2AT	UKPN	East England	5
CONRAD	Others	7.2	11	16/06/2021	IP8 4JU	UKPN	East England	5
CONRAD	Others	12.0	11	12/08/2016	TBC	UKPN	South East England	5
CONRAD	Others	6.0	11	22/05/2018	TBC	UKPN	South East England	5
CONRAD	Others	4.0	11	15/06/2018	RH18 5DW	UKPN	South East England	5
CONRAD	Others	7.5	11	11/05/2018	TBC	UKPN	South East England	5
CONRAD	Others	10.0	11	07/12/2018	ME3 0AB	UKPN	South East England	5

Appendix B: Top Players of Connected Offers at Distribution Grid Level

Table 9-6: Details of top players of connected offers at distribution grid level

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers
CONRAD	Others	42.1	33	19/03/2020	PR2 5NQ	ENW	North West England	1
CONRAD	Others	20.0	33	22/10/2020	FY2 0JF	ENW	North West England	1
CONRAD	Others	0.0	33	22/02/2017	GL2 5HS	NGED	West Midlands	1
CONRAD	Others	19.3	11	22/01/2021	WV14 9NA	NGED	West Midlands	1
CONRAD	Others	19.3	11	22/01/2021	WV14 9NA	NGED	West Midlands	1
CONRAD	Others	40.1	33	05/12/2017	SA5 4SF	NGED	South Wales	1
CONRAD	Others	6.4	11	23/10/2015	TA6 4DR	NGED	South West England	1
CONRAD	Others	20.1	33	15/08/2016	EX2 8EE	NGED	South West England	1
CONRAD	Others	21.0	33	01/08/2017	TQ2 8JG	NGED	South West England	1
CONRAD	Others	15.4	33	01/06/2017	PL4 0SF	NGED	South West England	1
CONRAD	Others	5.0	11	01/06/2020	PL7 1RF	NGED	South West England	1
CONRAD	Others	4.3	11	14/09/2020	PL7 5ET	NGED	South West England	1
CONRAD	Others	7.3	11	03/02/2022	TA24 5BY	NGED	South West England	1
CONRAD	Others	7.1	11	TBC	SN11 9BS	SSE	Southern England	1
CONRAD	Others	6.8	TBC	08/09/2020	SN12 8LQ	SSE	Southern England	1
CONRAD	Others	15.2	11	TBC	BA21 5HA	SSE	Southern England	1
CONRAD	Others	6.0	11	11/09/2019	CM5 0JR	UKPN	East England	1
CONRAD	Others	7.5	11	18/03/2021	CM13 3SS	UKPN	East England	1
CONRAD	Others	6.0	11	23/07/2019	MK45 5BP	UKPN	East England	1
CONRAD	Others	7.2	11	17/02/2022	PE7 3GP	UKPN	East England	1
CONRAD	Others	6.1	11	01/10/2021	LU5 6HT	UKPN	East England	1
UK POWER RESERVE	Others	20.0	33	14/07/2017	OL9 9EY	ENW	North West England	2
UK POWER RESERVE	Others	10.0	11	01/02/2002	M22 5YA	ENW	North West England	2
UK POWER RESERVE	Others	18.0	33	14/10/2017	M44 5AX	ENW	North West England	2
UK POWER RESERVE	Others	20.0	33	14/03/2017	M31 4QN	ENW	North West England	2
UK POWER RESERVE	Others	17.5	33	01/10/2018	WA12 0HN	ENW	North West England	2
UK POWER RESERVE	Others	20.0	33	14/10/2017	SK16 4RE	ENW	North West England	2
UK POWER RESERVE	Others	25.0	132	27/07/2000	LE14 3RD	NGED	East Midlands	2
UK POWER RESERVE	Others	9.9	33	01/01/2000	TA3 6RX	NGED	South West England	2
UK POWER RESERVE	Others	24.0	33	03/03/2017	DN40ï¿½ï¿	NPG	Yorkshire	2
UK POWER RESERVE	Others	20.0	33	TBC	WA4 1PD	SPEN	North Wales, Merseyside and Cheshire	2
UK POWER RESERVE	Battery	20.0	33	TBC	WA7 4DS	SPEN	North Wales, Merseyside and Cheshire	2
UK POWER RESERVE	Others	7.5	11	TBC	WA9 5EA	SPEN	North Wales, Merseyside and Cheshire	2
UK POWER RESERVE	Battery	20.0	33	TBC	CH65 2JF	SPEN	North Wales, Merseyside and Cheshire	2
UK POWER RESERVE	Others	20.0	11	12/04/2017	HP2 7DU	UKPN	East England	2
UK POWER RESERVE	Others	20.0	11	05/04/2017	N17 0QJ	UKPN	East England	2
UK POWER RESERVE	Others	4.6	11	12/01/2015	TN24 0GP	UKPN	South East England	2
UK POWER RESERVE	Others	10.0	11	06/06/2002	TN24 0GP	UKPN	South East England	2
CENTRICA	Battery	50.0	132	01/09/2018	LA13 0PQ	ENW	North West England	3
CENTRICA	Others	20.0	66	01/06/2017	B98 7SE	NGED	West Midlands	3
CENTRICA	Others	99.9	132	TBC	DN20 9LT	NPG	Yorkshire	3
CENTRICA	Others	1.6	TBC	09/01/2013	EH5 1SG	SPEN	South and Central Scotland	3
CENTRICA	Others	360.0	33	13/12/1990	PE1 5NT	UKPN	East England	3
CENTRICA	Others	48.5	132	20/08/2018	PE1 5NT	UKPN	East England	3
MINETY SOUTH STORAGE EXP(	Battery	110.7	TBC	07/01/2022	SN16 9PL	SSE	Southern England	4
MERCIA POWER	Others	6.1	11	01/12/2018	SK13 1QH	ENW	North West England	5
MERCIA POWER	Others	3.0	11	09/03/2021	NG19 9BG	NGED	East Midlands	5
MERCIA POWER	Others	7.0	11	15/06/2018	NG9 6DH	NGED	East Midlands	5
MERCIA POWER	Others	5.2	11	04/09/2018	NG4 2BD	NGED	East Midlands	5
MERCIA POWER	Others	4.0	11	03/08/2018	S80 1RA	NGED	East Midlands	5
MERCIA POWER	Others	16.0	33	28/09/2018	NG4 2JU	NGED	East Midlands	5
MERCIA POWER	Others	14.0	33	04/12/2018	DE5 3SW	NGED	East Midlands	5
MERCIA POWER	Others	7.2	11	13/12/2018	S80 3ET	NGED	East Midlands	5
MERCIA POWER	Others	7.2	11	01/10/2019	DE7 8EF	NGED	East Midlands	5
MERCIA POWER	Others	8.9	11	01/12/2019	S43 2PR	NGED	East Midlands	5
MERCIA POWER	Others	4.3	11	01/11/2020	DE14 2DW	NGED	East Midlands	5
MERCIA POWER	Others	4.0	11	01/10/2020	DE14 2DW	NGED	East Midlands	5
MERCIA POWER	Others	5.7	11	30/11/2021	NG17 2NB	NGED	East Midlands	5
MERCIA POWER	Others	4.5	11	01/04/2021	NG17 2NB	NGED	East Midlands	5
MERCIA POWER	Others	25.0	66	01/04/2016	DY10 4JB	NGED	West Midlands	5
MERCIA POWER	Others	8.0	11	01/12/2019	B7 5TR	NGED	West Midlands	5
LIGHTSOURCE	Photovoltaic	6.9	33	15/12/2015	TF11 8QY	WPD	West Midlands	3
LIGHTSOURCE	Photovoltaic	3.1	33	04/02/2015	CF71 7LT	WPD	South Wales	3

Table 9-7: Details of top players of connected offers at distribution grid level (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers
LIGHTSOURCE	Photovoltaic	3.5	11	16/12/2015	CF38 1SL	WPD	South Wales	3
LIGHTSOURCE	Photovoltaic	2.9	11	02/12/2016	SA65 9RH	WPD	South Wales	3
LIGHTSOURCE	Photovoltaic	4.1	33	14/02/2017	CF45 3UX	WPD	South Wales	3
LIGHTSOURCE	Photovoltaic	1.0	11	31/03/2017	CF61 2YT	WPD	South Wales	3
LIGHTSOURCE	Photovoltaic	4.2	11	07/12/2016	NP44 7AS	WPD	South Wales	3
LIGHTSOURCE	Photovoltaic	6.6	11	02/03/2017	NP44 3EE	WPD	South Wales	3
LIGHTSOURCE	Photovoltaic	1.5	11	01/07/2012	EX16 8BJ	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	1.0	11	02/02/2013	EX21 5RF	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	1.1	11	21/03/2013	TA3 6AY	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	1.1	11	01/03/2013	EX17 5LS	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	2.6	11	10/04/2013	EX31 3NY	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	1.2	11	25/04/2013	EX16 9QH	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	3.6	33	25/10/2013	EX39 4QX	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	1.1	11	01/08/2013	PL19 0QT	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	2.9	33	18/03/2014	EX38 7HU	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	3.9	33	25/03/2014	BA4 4JT	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	1.0	11	01/11/2014	PL30 5HD	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	7.4	33	24/11/2014	TA11 6JA	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	4.3	33	02/02/2015	EX39 5QH	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	3.5	33	23/03/2015	EX8 5QG	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	4.8	33	09/12/2015	TA21 0LX	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	2.2	33	03/03/2017	EX17 6SJ	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	WPD	South West England	3
LIGHTSOURCE	Photovoltaic	3.8	11	27/01/2017	KY1 3MW	SP	South and Central Scotland	3
LIGHTSOURCE	Photovoltaic	3.8	33	22/12/2015	LL14 1TU	SP	North Wales, Merseyside and Cheshire	3
LIGHTSOURCE	Photovoltaic	11.0	33	02/08/2016	SY4 5TB	SP	North Wales, Merseyside and Cheshire	3
LIGHTSOURCE	Photovoltaic	3.5	33	09/02/2017	SY13 4QL	SP	North Wales, Merseyside and Cheshire	3
LIGHTSOURCE	Photovoltaic	2.3	11	30/11/2016	LL52 6PU	SP	North Wales, Merseyside and Cheshire	3
LIGHTSOURCE	Photovoltaic	6.0	33	16/12/2015	SY13 3PF	SP	North Wales, Merseyside and Cheshire	3
LIGHTSOURCE	Photovoltaic	8.0	33	15/12/2015	LL53 6DW	SP	North Wales, Merseyside and Cheshire	3
LIGHTSOURCE	Photovoltaic	3.9	33	15/01/2017	CW11 1RG	SP	North Wales, Merseyside and Cheshire	3
LIGHTSOURCE	Photovoltaic	9.5	33	TBC	SN12 8LR	SSE	Southern England	3
LIGHTSOURCE	Photovoltaic	14.3	33	TBC	GL7 5DX	SSE	Southern England	3
LIGHTSOURCE	Photovoltaic	3.1	33	TBC	BH21 3QZ	SSE	Southern England	3
LIGHTSOURCE	Photovoltaic	4.3	33	26/03/2015	SP7 9HD	SSE	Southern England	3
LIGHTSOURCE	Photovoltaic	4.0	33	31/03/2016	BN18 0LN	SSE	Southern England	3
MERCIA POWER	Others	3.0	11	09/03/2021	NG19 9BG	WPD	East Midlands	4
MERCIA POWER	Others	7.0	11	15/06/2018	NG9 6DH	WPD	East Midlands	4
MERCIA POWER	Others	5.2	11	04/09/2018	NG4 2BD	WPD	East Midlands	4
MERCIA POWER	Others	4.0	11	03/08/2018	S80 1RA	WPD	East Midlands	4
MERCIA POWER	Others	16.0	33	28/09/2018	NG4 2JU	WPD	East Midlands	4
MERCIA POWER	Others	14.0	33	04/12/2018	DE5 3SW	WPD	East Midlands	4
MERCIA POWER	Others	7.2	11	13/12/2018	S80 3ET	WPD	East Midlands	4
MERCIA POWER	Others	7.2	11	01/10/2019	DE7 8EF	WPD	East Midlands	4
MERCIA POWER	Others	8.9	11	01/12/2019	S43 2PR	WPD	East Midlands	4
MERCIA POWER	Others	4.3	11	01/11/2020	DE14 2DW	WPD	East Midlands	4
MERCIA POWER	Others	4.0	11	01/10/2020	DE14 2DW	WPD	East Midlands	4
MERCIA POWER	Others	5.7	11	30/11/2021	NG17 2NB	WPD	East Midlands	4
MERCIA POWER	Others	4.5	11	01/04/2021	NG17 2NB	WPD	East Midlands	4
MERCIA POWER	Others	25.0	66	01/04/2016	DY10 4JB	WPD	West Midlands	4
MERCIA POWER	Others	8.0	11	01/12/2019	B7 5TR	WPD	West Midlands	4
MERCIA POWER	Others	6.1	11	01/12/2018	SK13 1QH	ENW	North West England	4
UK UTILITY RESERVE LIMITED	Others	20.0	33	31/10/2018	MK1 1EX	WPD	East Midlands	5
UK UTILITY RESERVE LIMITED	Others	40.0	33	16/03/2019	DE21 7ZS	WPD	East Midlands	5
UK UTILITY RESERVE LIMITED	Others	20.0	33	08/10/2018	SA12 6HQ	WPD	South Wales	5
UK UTILITY RESERVE LIMITED	Others	20.0	33	28/08/2018	TQ4 7QL	WPD	South West England	5

Appendix C: Top Players of Accepted Offers by Technology

Table 9-8: Details of top players of accepted offers for battery storage sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Battery
BLUESTONE ENERGY	Battery	98.0	132	29/12/2021	CV2 1NQ	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	98.0	132	04/08/2022	B76 0BJ	NGED	West Midlands	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	FK3 3NP	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA4 8AN	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA2 7BY	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	49.0	33	TBC	PA14 5DN	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA3 3DP	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	PA2 8UE	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	TBC	ML5 4RL	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	150.0	TBC	30/09/2021	SN12 8LW	SSE	Southern England	1
BLUESTONE ENERGY	Battery	28.0	33	29/06/2020	RM14 3TD	UKPN	East England	1
BLUESTONE ENERGY	Battery	40.0	132	14/10/2021	RM14 3JD	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	18/10/2022	NR4 6TQ	UKPN	East England	1
BLUESTONE ENERGY	Battery	93.1	132	07/01/2022	KT21 2BU	UKPN	South East England	1
BLUESTONE ENERGY	Battery	40.0	132	15/11/2022	M14 3TQ	UKPN	East England	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	B91 2TH	NGED	West Midlands	1
BLUESTONE ENERGY	Battery	248.0	132	15/11/2022	LN5 0BY	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA3 1HU	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	50.0	33	15/11/2022	PA3 4DF	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA2 8BJ	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	FK4 1SN	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA2 7DA	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	G3 8YW	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	BH22 0NF	SSE	Southern England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	KT10 7LH	UKPN	South East England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	G74 4GY	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	KT15 3PS	UKPN	South East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	ME3 8QQ	UKPN	South East England	1
BLUESTONE ENERGY	Battery	150.0	132	15/11/2022	WA7 4XT	SPEN	North Wales, Merseyside ar	1
BLUESTONE ENERGY	Battery	60.0	11	15/11/2022	G72 9UL	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CR4 4HU	UKPN	London	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	TN33 9BN	UKPN	South East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CR4 4HU	UKPN	London	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DN37 7AL	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	33	15/11/2022	NG33 4AB	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	HU8 8DG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	NE16 3BJ	NPG	North East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	RM14 3PH	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	SK15 3BY	ENW	North West England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	FK2 0YG	SPEN	South and Central Scotland	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S61 4QH	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	50.0	33	15/11/2022	SK14 4NL	ENW	North West England	1
BLUESTONE ENERGY	Battery	40.0	33	15/11/2022	LL68 9DW	SPEN	North Wales, Merseyside ar	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DE14 3DP	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DE14 3DP	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	NG8 6AL	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S9 1BG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S9 1BG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	60	33	15/11/2022	SK8 5QA	ENW	North West England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CV4 8LG	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240	132	15/11/2022	MK41 0EW	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	LS14 1NG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	49	33	15/11/2022	LS14 1NG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	49.0	33	15/11/2022	CV4 8LG	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	49	33	15/11/2022	NG15 0DR	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	B92 0DX	NGED	West Midlands	1

Table 9-9: Details of top players of accepted offers for battery storage sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Battery
GREEN SWITCH CAPITAL LIMIT	Battery	15	33	21/06/2022	PL14 3SH	NGED	South West England	2
GREEN SWITCH CAPITAL LIMIT	Battery	49.9	132	04/08/2022	PL21 9LD	NGED	South West England	2
GREEN SWITCH CAPITAL LIMIT	Battery	15	33	19/07/2022	PL17 7HN	NGED	South West England	2
GREEN SWITCH CAPITAL LIMIT	Battery	99.9	132	03/11/2022	WS15 1PT	NGED	West Midlands	2
GREEN SWITCH CAPITAL LIMIT	Battery	49.9	132	02/08/2022	PE14 7JX	UKPN	East England	2
GREEN SWITCH CAPITAL LIMIT	Battery	240.0	132	08/07/2022	NR16 1JD	UKPN	East England	2
GREEN SWITCH CAPITAL LIMIT	Battery	228	132	15/09/2022	NR14 8FL	UKPN	East England	2
GREEN SWITCH CAPITAL LIMIT	Battery	178.1	132	04/10/2022	PE14 7JX	UKPN	East England	2
CONRAD	Battery	24.2	33	16/05/2022	BB1 3ES	ENW	North West England	3
CONRAD	Battery	7.2	11	31/03/2020	BS2 0TA	NGED	South West England	3
CONRAD	Battery	5.5	11	12/11/2020	EX14 4LG	NGED	South West England	3
CONRAD	Battery	22.0	33	19/03/2021	TQ2 8JJ	NGED	South West England	3
CONRAD	Battery	49.9	132	08/09/2021	TA6 6PQ	NGED	South West England	3
CONRAD	Battery	49.9	132	14/11/2021	PL12 6PU	NGED	South West England	3
CONRAD	Battery	15.4	33	24/12/2021	PL7 5AA	NGED	South West England	3
CONRAD	Battery	15.4	33	24/11/2021	TA23 0NA	NGED	South West England	3
CONRAD	Battery	49.9	132	11/03/2022	TA4 1EJ	NGED	South West England	3
CONRAD	Battery	99.0	132	05/08/2022	ST9 0NB	NGED	West Midlands	3
CONRAD	Battery	70.4	132	27/07/2022	WV10 7JZ	NGED	West Midlands	3
CONRAD	Battery	99.0	132	14/09/2022	CV8 1QB	NGED	East Midlands	3
CONRAD	Battery	99	132	07/11/2022	B65 9DS	NGED	West Midlands	3
CONRAD	Battery	49.9	TBC	10/03/2022	AB51 0XY	SSE	North Scotland	3
CONRAD	Battery	25.3	TBC	06/05/2022	SN12 8LT	SSE	Southern England	3
CONRAD	Battery	99.0	TBC	15/11/2022	SO45 1DT	SSE	Southern England	3
FPC ELECTRIC LAND	Battery	30	33	13/10/2021	M46 0RL	ENW	North West England	4
FPC ELECTRIC LAND	Battery	42.0	33	13/10/2021	SK14 4AF	ENW	North West England	4
FPC ELECTRIC LAND	Battery	30	33	15/10/2021	BL5 3LB	ENW	North West England	4
FPC ELECTRIC LAND	Battery	25.0	33	30/08/2021	DE14 1QG	NGED	East Midlands	4
FPC ELECTRIC LAND	Battery	20	11	17/03/2022	B30 3AG	NGED	West Midlands	4
FPC ELECTRIC LAND	Battery	100.0	132	07/04/2022	WS10 0PB	NGED	West Midlands	4
FPC ELECTRIC LAND	Battery	120	132	09/06/2022	DY13 9RB	NGED	West Midlands	4
FPC ELECTRIC LAND	Battery	70.0	132	12/05/2022	BS10 7SE	NGED	South West England	4
FPC ELECTRIC LAND	Battery	120	132	21/10/2022	NG11 0EA	NGED	East Midlands	4
FPC ELECTRIC LAND	Battery	100.0	TBC	13/09/2022	SN12 8LW	SSE	Southern England	4
FPC ELECTRIC LAND	Battery	100	132	21/10/2021	NR14 8QD	UKPN	East England	4
BALANCE POWER	Battery	30.0	33	15/07/2021	OL16 4NR	ENW	North West England	5
BALANCE POWER	Battery	100	132	19/03/2022	M31 4QN	ENW	North West England	5
BALANCE POWER	Battery	49.5	132	02/08/2021	TQ4 7PE	NGED	South West England	5
BALANCE POWER	Battery	30	66	07/07/2021	B61 7EL	NGED	West Midlands	5
BALANCE POWER	Battery	49.9	132	01/09/2021	WV13 3EH	NGED	West Midlands	5
BALANCE POWER	Battery	49.9	132	11/01/2022	B32 4AR	NGED	West Midlands	5
BALANCE POWER	Battery	49.5	132	02/09/2021	LE10 3DP	NGED	East Midlands	5
BALANCE POWER	Battery	49.5	132	23/12/2021	BS35 3TF	NGED	West Midlands	5
BALANCE POWER	Battery	49.5	132	02/03/2022	BS35 3TF	NGED	West Midlands	5
BALANCE POWER	Battery	49.5	33	19/05/2022	DY6 0BA	NGED	West Midlands	5
BALANCE POWER	Battery	49.5	132	19/05/2022	DY6 0BA	NGED	West Midlands	5
BALANCE POWER	Battery	40	33	02/08/2022	ST10 1PN	NGED	West Midlands	5
BALANCE POWER	Battery	29.9	33	TBC	KA6 6NF	SPEN	South and Central Scotland	5
BALANCE POWER	Battery	52.1	TBC	13/08/2021	BH21 6SE	SSE	Southern England	5
BALANCE POWER	Battery	49.9	132	18/02/2021	BN44 3FL	UKPN	South East England	5

Table 9-10: Details of top players of accepted offers for photovoltaic sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Photovoltaic
LOW CARBON	Photovoltaic	20.0	33	11/06/2019	NN13 5QG	NGED	East Midlands	1
LOW CARBON	Photovoltaic	20.0	33	24/05/2019	S43 3YH	NGED	East Midlands	1
LOW CARBON	Photovoltaic	40.0	33	02/10/2019	CV47 2SL	NGED	East Midlands	1
LOW CARBON	Photovoltaic	20.0	33	18/12/2019	CF62 3BJ	NGED	South Wales	1
LOW CARBON	Photovoltaic	14.3	33	22/01/2020	MK18 2JW	NGED	East Midlands	1
LOW CARBON	Photovoltaic	35.0	33	13/10/2020	LE10 3EE	NGED	East Midlands	1
LOW CARBON	Photovoltaic	23.0	33	14/05/2021	WV7 3AT	NGED	West Midlands	1
LOW CARBON	Photovoltaic	30.0	33	28/06/2021	S43 3YH	NGED	East Midlands	1
LOW CARBON	Photovoltaic	50.0	33	21/10/2021	NG32 2DF	NGED	East Midlands	1
LOW CARBON	Photovoltaic	35.0	33	01/10/2021	EX15 2PJ	NGED	South West England	1
LOW CARBON	Photovoltaic	49.9	132	13/09/2022	WR9 0PX	NGED	West Midlands	1
LOW CARBON	Photovoltaic	19.0	33	03/08/2022	NG34 8NR	NGED	East Midlands	1
LOW CARBON	Photovoltaic	9.9	33	02/09/2022	CV34 4BB	NGED	East Midlands	1
LOW CARBON	Photovoltaic	30.0	33	27/09/2022	NG12 5PU	NGED	East Midlands	1
LOW CARBON	Photovoltaic	50.0	TBC	10/09/2019	OX44 7LF	SSE	Southern England	1
LOW CARBON	Photovoltaic	15.0	11	23/04/2019	OX25 1NX	SSE	Southern England	1
LOW CARBON	Photovoltaic	20.0	TBC	11/09/2020	SP8 5JG	SSE	Southern England	1
LOW CARBON	Photovoltaic	45.5	TBC	25/09/2020	OX27 0AD	SSE	Southern England	1
LOW CARBON	Photovoltaic	15.0	TBC	09/10/2020	TBC	SSE	Southern England	1
LOW CARBON	Photovoltaic	50.0	TBC	27/10/2020	BA11 6QQ	SSE	Southern England	1
LOW CARBON	Photovoltaic	20.0	TBC	07/12/2020	OX9 7BT	SSE	Southern England	1
LOW CARBON	Photovoltaic	9.8	11	TBC	SP5 4NR	SSE	Southern England	1
LOW CARBON	Photovoltaic	10.0	11	TBC	SP5 4NR	SSE	Southern England	1
LOW CARBON	Photovoltaic	100.0	TBC	04/08/2021	SN12 7QQ	SSE	Southern England	1
LOW CARBON	Photovoltaic	100.0	TBC	14/10/2022	SN12 7QB	SSE	Southern England	1
LOW CARBON	Photovoltaic	15.0	33	13/08/2019	CM3 4AS	UKPN	East England	1
LOW CARBON	Photovoltaic	1.7	11	29/10/2019	AL10 9TX	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	20/12/2019	CM6 2QY	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	17/02/2020	CM9 6GT	UKPN	East England	1
LOW CARBON	Photovoltaic	49.9	132	09/04/2020	CM23 1BJ	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	29/04/2020	CO16 0HN	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	33	09/04/2020	CM77 8DS	UKPN	East England	1
LOW CARBON	Photovoltaic	49.9	132	12/06/2020	CM2 8UN	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	132	18/09/2020	CM6 2QY	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	33	21/08/2020	IP13 9AD	UKPN	East England	1
LOW CARBON	Photovoltaic	30.0	33	10/11/2020	HP27 9QX	UKPN	East England	1
LOW CARBON	Photovoltaic	70.0	132	14/08/2020	CO2 0EJ	UKPN	East England	1
LOW CARBON	Photovoltaic	50.0	33	26/03/2021	PE32 2LW	UKPN	East England	1
LOW CARBON	Photovoltaic	12.0	33	11/03/2021	CB11 3JT	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	33	30/06/2021	CM19 5HE	UKPN	East England	1
LOW CARBON	Photovoltaic	25.0	33	25/05/2021	CM16 7QQ	UKPN	East England	1
LOW CARBON	Photovoltaic	40.0	132	26/07/2021	SS4 3LT	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	30/06/2021	IP14 5BL	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	132	07/06/2021	CO7 7SN	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	19/07/2021	HP5 3PD	UKPN	East England	1
LOW CARBON	Photovoltaic	30.0	33	12/01/2022	HP22 5AX	UKPN	East England	1
LOW CARBON	Photovoltaic	37.0	33	23/02/2022	HP27 9QX	UKPN	East England	1
LOW CARBON	Photovoltaic	10.0	33	28/02/2022	IP13 9AD	UKPN	East England	1
LOW CARBON	Photovoltaic	10.0	33	16/05/2022	CM13 3SG	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	21/04/2022	PE19 6XG	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	33	08/08/2022	CM16 6PW	UKPN	East England	1
LOW CARBON	Photovoltaic	70.0	132	03/08/2022	SG8 7SH	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	07/07/2022	SG8 0NT	UKPN	East England	1
LOW CARBON	Photovoltaic	40.0	33	22/06/2022	MK43 0QQ	UKPN	East England	1
LOW CARBON	Photovoltaic	12.0	33	02/09/2022	CB10 2SU	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	14/10/2021	RH13 8DX	UKPN	South East England	1
LOW CARBON	Photovoltaic	14.0	33	22/12/2021	RH13 8DL	UKPN	South East England	1
PATHFINDER CLEAN ENERGY	Photovoltaic	49.8	132	13/10/2021	SY8 4LE	NGED	West Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	40.0	132	21/03/2022	GL2 8LT	NGED	West Midlands	2

Table 9-11: Details of top players of accepted offers for photovoltaic sites (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Photovoltaic
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	03/05/2022	TBC	NGED	West Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	TBC	NGED	South West England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	BS39 7SJ	NGED	South West England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	BA3 4DX	NGED	South West England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	30.0	33	14/10/2022	LE18 3TJ	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	20/10/2022	LE9 4LE	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	199.8	132	16/09/2022	NG11 0JY	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	22/11/2022	DY7 5AR	NGED	West Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	199.8	132	18/11/2022	B78 2EU	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	79.8	132	28/10/2022	CF5 6EZ	NGED	South Wales	2
PATHFINDER CLEAN ENERGY	Photovoltaic	15.0	33	05/04/2020	NR10 3BX	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	15.0	33	02/11/2020	IP21 4QS	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	69.0	132	24/08/2020	MK41 6AB	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	18.0	132	11/09/2020	NR10 3AG	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	16/10/2020	NR9 5DT	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	40.0	33	11/09/2020	SG7 5RH	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	48.0	132	02/03/2021	IP22 1AZ	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	27.0	33	30/04/2021	IP19 0RJ	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	49.8	132	31/08/2021	PE28 0AW	UKPN	East England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	78.0	132	17/01/2022	PE13 4PL	UKPN	East England	2
BLUESTONE ENERGY	Photovoltaic	40.0	33	12/06/2021	LE15 8RU	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	25.0	33	12/05/2021	TR16 5UN	NGED	South West England	3
BLUESTONE ENERGY	Photovoltaic	49.9	132	23/03/2022	B92 0DT	NGED	West Midlands	3
BLUESTONE ENERGY	Photovoltaic	50.0	132	09/03/2022	NG13 8HL	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	49.9	132	05/05/2022	NG13 8HL	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	30.0	132	16/09/2022	LE8 0QS	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	3.5	33	06/10/2022	LE15 8RU	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	1.1	11	18/10/2022	SA67 8DE	NGED	South Wales	3
BLUESTONE ENERGY	Photovoltaic	42.8	66	06/04/2021	DL13 5AW	NPG	North East England	3
BLUESTONE ENERGY	Photovoltaic	38.7	33	TBC	PA3 3AG	SPEN	South and Central Sco	3
BLUESTONE ENERGY	Photovoltaic	45.0	TBC	18/07/2022	SN12 8NW	SSE	Southern England	3
BLUESTONE ENERGY	Photovoltaic	98.0	132	10/11/2021	CM6 3NJ	UKPN	East England	3
BLUESTONE ENERGY	Photovoltaic	7.0	33	20/06/2022	CM3 8HS	UKPN	East England	3
BLUESTONE ENERGY	Photovoltaic	6.0	11	15/11/2022	PL26 7AG	NGED	South West England	3
BLUESTONE ENERGY	Photovoltaic	49.0	132	15/11/2022	CM77 6SN	UKPN	East England	3
BLUESTONE ENERGY	Photovoltaic	49.0	132	15/11/2022	CM6 3JU	UKPN	East England	3
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	25.0	33	15/11/2022	B92 0DJ	NGED	West Midlands	3
BLUESTONE ENERGY	Photovoltaic	98.0	132	15/11/2022	DN36 5SG	NPG	Yorkshire	3
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	46.0	132	15/11/2022	NP18 1HU	NGED	South Wales	3
BLUESTONE ENERGY	Photovoltaic	7.0	11	15/11/2022	CM3 8EB	UKPN	East England	3
BLUESTONE ENERGY	Photovoltaic	4.0	33	15/11/2022	G3 8YW	SPEN	South and Central Sco	3
BLUESTONE ENERGY	Photovoltaic	4.0	11	15/11/2022	PA11 3RN	SPEN	South and Central Sco	3
BLUESTONE ENERGY	Photovoltaic	50.0	33	15/11/2022	G23 5HD	SPEN	South and Central Sco	3
BLUESTONE ENERGY	Photovoltaic	4.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	30.0	33	15/11/2022	LE8 0QT	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	30.0	33	15/11/2022	LE8 0QT	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	EH17 8SB	SPEN	South and Central Sco	3
BLUESTONE ENERGY	Photovoltaic	38.0	132	15/11/2022	CB2 5BP	UKPN	East England	3
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	3
BLUESTONE ENERGY	Photovoltaic	180.0	132	15/11/2022	DN36 5SG	NPG	Yorkshire	3
BLUESTONE ENERGY	Photovoltaic	1.0	11	15/11/2022	ML3 0EG	SPEN	South and Central Sco	3
BLUESTONE ENERGY	Photovoltaic	20.0	132	15/11/2022	B92 0DX	NGED	West Midlands	3
JBM	Photovoltaic	35.0	132	08/08/2018	EX15 1RF	NGED	South West England	4
JBM	Photovoltaic	49.9	132	28/11/2018	TR8 4LX	NGED	South West England	4
JBM	Photovoltaic	59.9	132	15/02/2019	NG25 0QR	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	06/02/2019	WR9 0QB	NGED	West Midlands	4

Table 9-12: Details of top players of accepted offers for photovoltaic sites (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Photovoltaic
JBM	Photovoltaic	38.0	0.4	08/10/2019	NG13 0FD	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	11/12/2019	WR15 8LG	NGED	West Midlands	4
JBM	Photovoltaic	49.9	132	09/04/2020	NN13 6DZ	NGED	East Midlands	4
JBM	Photovoltaic	45.0	132	03/04/2020	GL20 7BS	NGED	West Midlands	4
JBM	Photovoltaic	49.9	132	14/07/2020	GL18 1HG	NGED	West Midlands	4
JBM	Photovoltaic	49.9	132	19/08/2020	CV34 7BN	NGED	East Midlands	4
JBM	Photovoltaic	25.0	33	19/08/2020	CV47 2ST	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	09/10/2020	WS15 3RE	NGED	West Midlands	4
JBM	Photovoltaic	49.9	132	27/01/2021	LE9 9NB	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	29/01/2021	DE55 6HA	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	20/04/2021	BS24 6TL	NGED	South West England	4
JBM	Photovoltaic	30.0	132	20/04/2021	BS49 5JN	NGED	South West England	4
JBM	Photovoltaic	49.9	132	05/07/2021	WR13 6PD	NGED	West Midlands	4
JBM	Photovoltaic	30.0	33	19/11/2021	TF6 6BP	NGED	West Midlands	4
JBM	Photovoltaic	22.0	33	10/01/2022	BS37	NGED	West Midlands	4
JBM	Photovoltaic	49.9	132	03/03/2022	DY13 0SG	NGED	West Midlands	4
JBM	Photovoltaic	20.0	33	08/08/2022	LE14 3JP	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	15/07/2022	LE15 7LB	NGED	East Midlands	4
JBM	Photovoltaic	20.0	33	30/08/2022	NG12 2JW	NGED	East Midlands	4
JBM	Photovoltaic	0.001	TBC	05/10/2020	SN6 7SE	SSE	Southern England	4
JBM	Photovoltaic	35.0	TBC	13/10/2021	OX29 6UP	SSE	Southern England	4
JBM	Photovoltaic	49.9	11	18/10/2022	SN15 5BG	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	40.0	132	16/01/2020	ST18 9BU	NGED	West Midlands	5
DNO CONSULTING	Photovoltaic	20	33	24/03/2020	CF38 1SL	NGED	South Wales	5
DNO CONSULTING	Photovoltaic	26.0	66	26/05/2020	CV37 8LB	NGED	West Midlands	5
DNO CONSULTING	Photovoltaic	40	132	01/06/2020	GL2 7EF	NGED	West Midlands	5
DNO CONSULTING	Photovoltaic	20.0	0.4	29/10/2021	TA7 8QL	NGED	South West England	5
DNO CONSULTING	Photovoltaic	40	TBC	05/03/2014	SO51 6DQ	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	32.6	TBC	11/07/2019	DT8 3HS	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	35	33	28/11/2017	AB42 3EN	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	9.9	33	24/09/2019	PH2 9LX	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	9.9	33	24/09/2019	PH2 9LN	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	12.6	11	17/01/2020	RG2 9JX	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	20	TBC	21/12/2020	DT2 0EB	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	6.8	11	TBC	RG23 7EA	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	40	TBC	TBC	BA14 6PL	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	50.0	11	TBC	BH23 6BB	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	20	11	01/09/2021	RG27 0LE	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	20.0	11	09/09/2021	OX12 8JA	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	15	11	09/12/2021	PO22 9UP	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	30.0	TBC	02/12/2021	SO21 2QU	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	12	33	22/02/2022	SP7 9LD	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	40.0	TBC	08/04/2022	SO51 6DQ	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	35	TBC	18/03/2022	AB42 3EN	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	40.0	TBC	06/05/2022	IV30 8LX	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	99.8	TBC	06/05/2022	IV30 8NQ	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	99.8	TBC	24/02/2022	OX9 2NR	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	3.5	11	04/05/2022	PO22 9UP	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	12.0	11	10/06/2022	SO51 9AG	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	12	11	13/11/2022	SO40 7DX	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	30.0	TBC	19/11/2022	SO21 2QU	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	49.999	132	07/03/2019	SG9 0JB	UKPN	East England	5
DNO CONSULTING	Photovoltaic	40.0	132	16/11/2018	HP22 5AX	UKPN	East England	5
DNO CONSULTING	Photovoltaic	15	33	10/02/2020	NR20 3EW	UKPN	East England	5

Table 9-13: Details of top players of accepted offers for onshore wind sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Onshore wind
TNEI	Onshore Win	50.4	33	22/05/2019	PA31 8NY	SSE	North Scotland	1
TNEI	Onshore Win	19.4	33	18/06/2019	IV36 2QH	SSE	North Scotland	1
TNEI	Onshore Win	50.4	33	31/12/2019	KW13 6YT	SSE	North Scotland	1
TNEI	Onshore Win	21.0	33	28/05/2020	TBC	SSE	North Scotland	1
TNEI	Onshore Win	37.8	TBC	07/10/2020	IV36 2QH	SSE	North Scotland	1
TNEI	Onshore Win	30.0	TBC	27/10/2020	KW15 1TX	SSE	North Scotland	1
TNEI	Onshore Win	30.0	TBC	27/10/2020	KW16 3NU	SSE	North Scotland	1
TNEI	Onshore Win	46.2	TBC	06/09/2021	AB54 4YD	SSE	North Scotland	1
TNEI	Onshore Win	72.6	TBC	17/11/2021	PA29 6XG	SSE	North Scotland	1
TNEI	Onshore Win	48.0	TBC	01/02/2022	TBC	SSE	North Scotland	1
TNEI	Onshore Win	7.1	TBC	10/03/2022	KW6 6EH	SSE	North Scotland	1
TNEI	Onshore Win	43.2	TBC	20/06/2022	IV36 2QH	SSE	North Scotland	1
TNEI	Onshore Win	30.0	TBC	16/10/2022	KW17 2DH	SSE	North Scotland	1
TNEI	Onshore Win	39.6	TBC	17/10/2022	AB54 4UX	SSE	North Scotland	1
WIND 2 LTD	Onshore Win	245.0	132	11/10/2022	TBC	NGED	South Wales	2
WIND 2 LTD	Onshore Win	19.8	33	09/01/2022	EH55 8LH	SPEN	South and Central Sc	2
WIND 2 LTD	Onshore Win	18.0	33	TBC	G77 6SQ	SPEN	South and Central Sc	2
WIND 2 LTD	Onshore Win	45.0	33	29/06/2020	IV56 8FH	SSE	North Scotland	2
WIND 2 LTD	Onshore Win	45.0	TBC	TBC	FK12 5JY	SSE	North Scotland	2
WIND 2 LTD	Onshore Win	17.2	TBC	22/02/2022	KW12 6UX	SSE	North Scotland	2
WIND 2 LTD	Onshore Win	45.0	TBC	30/05/2022	IV56 8FH	SSE	North Scotland	2
WIND 2 LTD	Onshore Win	24.8	TBC	11/10/2022	AB33 8NN	SSE	North Scotland	2
CENIN	Onshore Win	10.0	33	05/12/2017	NP22 4NJ	NGED	South Wales	3
CENIN	Onshore Win	74.0	132	11/06/2019	NP11 5AY	NGED	South Wales	3
CENIN	Onshore Win	29.4	33	23/09/2019	TBC	NGED	South Wales	3
CENIN	Onshore Win	12.0	11	08/06/2020	TBC	NGED	South Wales	3
CENIN	Onshore Win	50.0	132	27/01/2021	TBC	NGED	South Wales	3
CENIN	Onshore Win	49.0	132	26/01/2021	SA5 7LX	NGED	South Wales	3
CENIN	Onshore Win	2.5	11	20/12/2021	CF39 9UE	NGED	South Wales	3
CENIN	Onshore Win	3.0	11	29/03/2022	CF37 3LG	NGED	South Wales	3
CENIN	Onshore Win	103.0	132	02/11/2022	CF46 6TB	NGED	South Wales	3
ENERGIE KONTOR	Onshore Win	36.0	33	TBC	TD9 9TW	SPEN	South and Central Sc	4
ENERGIE KONTOR	Onshore Win	30.6	33	TBC	EH38 5YE	SPEN	South and Central Sc	4
ENERGIE KONTOR	Onshore Win	34.0	33	TBC	KA18 4AA	SPEN	South and Central Sc	4
ENERGIE KONTOR	Onshore Win	48.0	33	TBC	DG7 3XL	SPEN	South and Central Sc	4
ENERGIE KONTOR	Onshore Win	27.0	TBC	TBC	TD9 0SD	SPEN	South and Central Sc	4
ENERGIE KONTOR	Onshore Win	49.9	33	TBC	DG3 4JD	SPEN	South and Central Sc	4
ENERGIE KONTOR	Onshore Win	38.4	TBC	06/09/2021	IV17 0XP	SSE	North Scotland	4
EVANS ENERGY	Onshore Win	1.0	132	28/02/2019	PL32 9SW	NGED	South West England	5
EVANS ENERGY	Onshore Win	25.0	33	25/01/2022	TBC	NGED	South West England	5
EVANS ENERGY	Onshore Win	35.2	33	TBC	DG7 2HG	SPEN	South and Central Sc	5
EVANS ENERGY	Onshore Win	80.0	TBC	05/01/2022	IV12 5RE	SSE	North Scotland	5
EVANS ENERGY	Onshore Win	70.0	TBC	16/11/2022	IV12 5RE	SSE	North Scotland	5

Table 9-14: Details of top players of accepted offers for other technology sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Others
STOR	Others	21.1	33	13/03/2017	BL5 1BL	ENW	North West England	1
STOR	Others	21.1	33	20/06/2016	CA2 5AD	ENW	North West England	1
STOR	Others	21.1	33	03/06/2016	SK17 7HW	ENW	North West England	1
STOR	Others	21.1	33	08/08/2016	FY6 0PQ	ENW	North West England	1
STOR	Others	21.1	33	19/12/2017	BL5 3XX	ENW	North West England	1
STOR	Others	21.1	33	07/10/2016	BB1 3HY	ENW	North West England	1
STOR	Others	21.1	33	04/07/2016	SK17 7HS	ENW	North West England	1
STOR	Others	21.1	33	14/10/2016	SK16 5PL	ENW	North West England	1
STOR	Others	21.1	33	08/08/2016	FY6 0PQ	ENW	North West England	1
STOR	Others	21.1	33	21/07/2016	PR2 6RH	ENW	North West England	1
STOR	Others	21.1	33	20/06/2017	BL5 3LB	ENW	North West England	1
STOR	Others	21.1	33	19/12/2017	BL5 3XX	ENW	North West England	1
STOR	Others	21.1	33	20/06/2016	BL6 5JB	ENW	North West England	1
STOR	Others	21.1	33	10/10/2016	OL4 1DE	ENW	North West England	1
STOR	Others	15.8	33	09/11/2016	FY6 8JL	ENW	North West England	1
STOR	Others	21.1	33	14/10/2016	BB5 5JW	ENW	North West England	1
STOR	Others	21.1	33	21/07/2016	OL2 6HS	ENW	North West England	1
STOR	Others	21.1	33	07/10/2016	OL7 0PJ	ENW	North West England	1
STOR	Others	20.0	33	24/11/2021	TA4 1AH	NGED	South West England	1
STOR	Others	7.6	11	11/10/2017	HU9 5LP	NPG	Yorkshire	1
DNO CONSULTING	Others	125.2	TBC	28/05/2019	SL6 3SS	SSE	Southern England	2
DNO CONSULTING	Others	105.2	33	04/03/2020	SN12 7QG	SSE	Southern England	2
DNO CONSULTING	Others	35.5	11	28/11/2017	BA13 4WD	SSE	Southern England	2
DNO CONSULTING	Others	35.5	TBC	TBC	BA13 4WD	SSE	Southern England	2
DNO CONSULTING	Others	99.9	132	04/06/2019	CM19 5JY	UKPN	East England	2
CONRAD	Others	10.7	6.6	17/08/2020	WN3 4HH	ENW	North West England	3
CONRAD	Others	9.1	11	21/05/2019	M24 1RU	ENW	North West England	3
CONRAD	Others	7.7	11	28/05/2019	OL8 2LZ	ENW	North West England	3
CONRAD	Others	12.7	11	24/10/2019	B76 1BE	NGED	West Midlands	3
CONRAD	Others	7.0	11	08/10/2019	NG24 3BY	NGED	East Midlands	3
CONRAD	Others	14.4	11	20/10/2020	TA18 8LL	NGED	South West England	3
CONRAD	Others	7.2	11	12/01/2021	TA6 5LP	NGED	South West England	3
CONRAD	Others	5.0	11	02/03/2021	PL4 0SF	NGED	South West England	3
CONRAD	Others	6.0	11	17/06/2021	BA3 2AF	NGED	South West England	3
CONRAD	Others	10.1	11	29/06/2021	B69 4RJ	NGED	West Midlands	3
CONRAD	Others	5.0	TBC	TBC	CH6 5EX	SPEN	North Wales, Mersey	3
CONRAD	Others	5.0	11	21/11/2019	LL14 3LA	SPEN	North Wales, Mersey	3
CONRAD	Others	5.0	11	TBC	LL14 9RG	SPEN	North Wales, Mersey	3
CONRAD	Others	7.6	11	27/01/2020	SO31 5FS	SSE	Southern England	3
CONRAD	Others	7.6	11	20/06/2019	SN4 7SA	SSE	Southern England	3
CONRAD	Others	7.6	11	25/11/2020	SO50 6YU	SSE	Southern England	3
CONRAD	Others	7.6	11	TBC	BN18 0HX	SSE	Southern England	3
CONRAD	Others	10.1	11	TBC	PO22 9GH	SSE	Southern England	3
CONRAD	Others	5.1	11	11/08/2021	PO13 0AF	SSE	Southern England	3
CONRAD	Others	7.6	11	07/08/2022	SO31 5FS	SSE	Southern England	3
CONRAD	Others	5.3	11	22/03/2022	PO9 1JW	SSE	Southern England	3
CONRAD	Others	7.0	TBC	12/11/2022	SO22 4BF	SSE	Southern England	3
CONRAD	Others	7.5	11	22/12/2017	PE7 2EX	UKPN	East England	3
CONRAD	Others	10.0	11	19/06/2019	CM12 9HR	UKPN	East England	3
CONRAD	Others	8.5	11	17/02/2020	CM2 7AE	UKPN	East England	3
CONRAD	Others	7.2	11	18/05/2020	IP19 8RX	UKPN	East England	3
CONRAD	Others	5.1	11	08/04/2021	CB9 8PB	UKPN	East England	3
CONRAD	Others	8.0	11	20/07/2021	NR3 2AT	UKPN	East England	3
CONRAD	Others	7.2	11	16/06/2021	IP8 4JU	UKPN	East England	3
CONRAD	Others	12.0	11	12/08/2016	TBC	UKPN	South East England	3
CONRAD	Others	6.0	11	22/05/2018	TBC	UKPN	South East England	3
CONRAD	Others	4.0	11	15/06/2018	RH18 5DW	UKPN	South East England	3
CONRAD	Others	7.5	11	11/05/2018	TBC	UKPN	South East England	3
CONRAD	Others	10.0	11	07/12/2018	ME3 0AB	UKPN	South East England	3

Table 9-15: Details of top players of accepted offers for other technology sites (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, Others
PEEL ENVIRONMENTAL	Others	1.6	TBC	TBC	G81 1LX	SPEN	South and Central Sc	4
PEEL ENVIRONMENTAL	Others	35.0	33	TBC	G52	SPEN	South and Central Sc	4
PEEL ENVIRONMENTAL	Others	53.0	TBC	17/11/2017	CH2 4LB	SPEN	North Wales, Mersey	4
PEEL ENVIRONMENTAL	Others	27.8	TBC	17/11/2017	CH2 4LB	SPEN	North Wales, Mersey	4
PEEL ENVIRONMENTAL	Others	53.0	TBC	17/11/2017	CH2 4RB	SPEN	North Wales, Mersey	4
SWECO	Others	15.0	TBC	TBC	WA9 5DH	SPEN	North Wales, Mersey	5
SWECO	Others	105.6	TBC	06/05/2022	GU10 5DE	SSE	Southern England	5
SWECO	Others	30.0	TBC	08/11/2022	KY14 6EW	SSE	North Scotland	5
SWECO	Others	19.0	TBC	09/11/2022	KY14 6EW	SSE	North Scotland	5
BALANCE POWER	Others	7.0	6.6	01/06/2019	BB3 2TS	ENW	North West England	5
BALANCE POWER	Others	30.0	33	15/07/2021	OL16 4NR	ENW	North West England	5
BALANCE POWER	Others	6.0	11	03/08/2017	CA11 9PS	ENW	North West England	5
BALANCE POWER	Others	7.8	6.6	17/12/2018	OL12 7LQ	ENW	North West England	5
BALANCE POWER	Others	100.0	132	19/03/2022	M31 4QN	ENW	North West England	5
BALANCE POWER	Others	5.0	11	30/11/2018	S44 6BJ	NGED	East Midlands	5
BALANCE POWER	Others	7.6	11	16/09/2020	LE19 2JU	NGED	East Midlands	5
BALANCE POWER	Others	7.1	11	10/11/2020	B97 6BB	NGED	West Midlands	5
BALANCE POWER	Others	7.1	TBC	02/11/2020	RG8 0HS	SSE	Southern England	5
BALANCE POWER	Others	7.6	11	10/03/2020	CO10 2YA	UKPN	East England	5

Appendix D: Top Players of Connected Offers by Technology

Table 9-16: Details of top players of connected offers for battery storage sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, Battery
MINETY SOUTH STORAGE EXPORT	Battery	110.7	TBC	07/01/2022	SN16 9PL	SSE	Southern England	1
AURA POWER	Battery	10.0	33	26/03/2018	SS14 3JH	UKPN	East England	2
AURA POWER	Battery	49.9	132	31/10/2021	CB25 0BP	UKPN	East England	2
CENTRICA	Battery	50.0	132	01/09/2018	LA13 0PQ	ENW	North West England	3
STRATERA ENERGY LIMITED	Battery	50.0	132	12/11/2017	SG9 0JB	UKPN	East England	3
ATON ENERGY	Battery	50.0	132	18/09/2020	IP13 0DY	UKPN	East England	3
BURN PARK FARM ENERGY STORAGE	Battery	49.9	132	01/01/2019	HU16 5RZ	NPG	Yorkshire	4
GREEN LANE BESS, THURCROFT	Battery	49.9	66	02/09/2020	S66 9JE	NPG	Yorkshire	4
HC ESS4 LIMITED	Battery	49.0	33	09/12/2019	PR2 5NJ	ENW	North West England	5
BESS	Battery	10.4	33	22/04/2019	LE65 1WU	WPD	East Midlands	5

Table 9-17: Details of top players of connected offers for photovoltaic sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, Photovoltaic
LIGHTSOURCE	Photovoltaic	10.0	33	31/03/2014	NG13 9PL	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	12.0	33	31/03/2014	DN22 8BE	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	27.0	33	27/03/2014	NG32 3RN	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	10.0	33	17/03/2015	NG22 0AN	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	17.0	33	20/03/2015	NG20 9PG	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	2.0	11	18/12/2015	CV9 3LZ	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	4.2	33	29/03/2016	NG12 2JZ	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	4.2	33	17/03/2016	S43 2NP	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	3.9	33	10/03/2017	LE16 7TS	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	4.0	33	28/02/2017	S80 4GZ	NGED	East Midlands	1
LIGHTSOURCE	Photovoltaic	15.0	33	27/03/2015	SY5 7DH	NGED	West Midlands	1
LIGHTSOURCE	Photovoltaic	6.9	33	15/12/2015	TF11 8QY	NGED	West Midlands	1
LIGHTSOURCE	Photovoltaic	3.1	33	04/02/2015	CF71 7LT	NGED	South Wales	1
LIGHTSOURCE	Photovoltaic	3.5	11	16/12/2015	CF38 1SL	NGED	South Wales	1
LIGHTSOURCE	Photovoltaic	2.9	11	02/12/2016	SA65 9RH	NGED	South Wales	1
LIGHTSOURCE	Photovoltaic	4.1	33	14/02/2017	CF45 3UX	NGED	South Wales	1
LIGHTSOURCE	Photovoltaic	1.0	11	31/03/2017	CF61 2YT	NGED	South Wales	1
LIGHTSOURCE	Photovoltaic	4.2	11	07/12/2016	NP44 7AS	NGED	South Wales	1
LIGHTSOURCE	Photovoltaic	6.6	11	02/03/2017	NP44 3EE	NGED	South Wales	1
LIGHTSOURCE	Photovoltaic	1.5	11	01/07/2012	EX16 8BJ	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	1.0	11	02/02/2013	EX21 5RF	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	1.1	11	21/03/2013	TA3 6AY	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	1.1	11	01/03/2013	EX17 5LS	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	2.6	11	10/04/2013	EX31 3NY	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	1.2	11	25/04/2013	EX16 9QH	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	3.6	33	25/10/2013	EX39 4QX	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	1.1	11	01/08/2013	PL19 0QT	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	2.9	33	18/03/2014	EX38 7HU	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	3.9	33	25/03/2014	BA4 4JT	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	1.0	11	01/11/2014	PL30 5HD	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	7.4	33	24/11/2014	TA11 6JA	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	4.3	33	02/02/2015	EX39 5QH	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	3.5	33	23/03/2015	EX8 5QG	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	4.8	33	09/12/2015	TA21 0LX	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	2.2	33	03/03/2017	EX17 6SJ	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	13.8	132	01/12/2016	EX22 6TD	NGED	South West England	1
LIGHTSOURCE	Photovoltaic	3.8	11	27/01/2017	KY1 3MW	SPEN	South and Central Scotland	1

Table 9-18: Details of top players of connected offers for photovoltaic sites (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, Photovoltaic
LIGHTSOURCE	Photovoltaic	3.8	33	22/12/2015	LL14 1TU	SPEN	North Wales, Merseyside and Cheshire	1
LIGHTSOURCE	Photovoltaic	11.0	33	02/08/2016	SY4 5TB	SPEN	North Wales, Merseyside and Cheshire	1
LIGHTSOURCE	Photovoltaic	3.5	33	09/02/2017	SY13 4QL	SPEN	North Wales, Merseyside and Cheshire	1
LIGHTSOURCE	Photovoltaic	2.3	11	30/11/2016	LL52 6PU	SPEN	North Wales, Merseyside and Cheshire	1
LIGHTSOURCE	Photovoltaic	6.0	33	16/12/2015	SY13 3PF	SPEN	North Wales, Merseyside and Cheshire	1
LIGHTSOURCE	Photovoltaic	8.0	33	15/12/2015	LL53 6DW	SPEN	North Wales, Merseyside and Cheshire	1
LIGHTSOURCE	Photovoltaic	3.9	33	15/01/2017	CW11 1RG	SPEN	North Wales, Merseyside and Cheshire	1
LIGHTSOURCE	Photovoltaic	3.1	33	TBC	BH21 3QZ	SSE	Southern England	1
LIGHTSOURCE	Photovoltaic	4.3	33	26/03/2015	SP7 9HD	SSE	Southern England	1
LIGHTSOURCE	Photovoltaic	4.0	33	31/03/2016	BN18 0LN	SSE	Southern England	1
LIGHTSOURCE	Photovoltaic	4.0	11	18/05/2015	PE38 0AA	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	5.0	33	04/04/2014	CM3 1QG	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	4.2	33	13/08/2015	CO11 2NX	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	6.0	33	30/03/2015	LU7 9PB	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	5.0	33	11/11/2015	CM6 3BD	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	45.0	11	16/03/2015	SG8 9NW	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	3.8	33	15/03/2016	NR14 8AJ	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	6.2	11	31/12/2015	CO2 0NU	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	35.0	33	18/08/2020	CB25 0BN	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	8.4	33	18/12/2015	TN22 5QP	UKPN	South East England	1
LIGHTSOURCE	Photovoltaic	4.4	33	18/03/2015	TN39 5JL	UKPN	South East England	1
GREENFIELDS (F) LIMITED	Photovoltaic	53.9	132	01/11/2020	NP18 2AY	NGED	South Wales	2
EEB	Photovoltaic	45.6	33	04/08/2022	NG34 8SF	NGED	East Midlands	3
AEE RENEWABLES PLC	Photovoltaic	15.0	33	24/03/2014	BS36 2NY	NGED	West Midlands	4
AEE RENEWABLES PLC	Photovoltaic	4.6	33	27/02/2013	SA70 8NQ	NGED	South Wales	4
AEE RENEWABLES PLC	Photovoltaic	4.5	33	12/10/2011	EX13 5TX	NGED	South West England	4
AEE RENEWABLES PLC	Photovoltaic	4.6	33	13/03/2012	EX16 7HL	NGED	South West England	4
AEE RENEWABLES PLC	Photovoltaic	4.7	33	15/03/2013	TA4 3HA	NGED	South West England	4
AEE RENEWABLES PLC	Photovoltaic	4.0	11	20/03/2015	EX15 2QQ	NGED	South West England	4
AEE RENEWABLES PLC	Photovoltaic	4.3	33	TBC	TBC	SSE	Southern England	4
AEE RENEWABLES PLC	Photovoltaic	9.5	33	TBC	SP11 6PL	SSE	Southern England	4
AEE RENEWABLES PLC	Photovoltaic	4.0	33	11/04/2014	IP18 6SG	UKPN	East England	4
AEE RENEWABLES PLC	Photovoltaic	40.0	11	01/12/2019	PE19 5JB	UKPN	East England	4
DCP 179 DEEMED CAPACIT	Photovoltaic	38.4	0.4	12/05/2022	SY5 9NE	NGED	West Midlands	5
AEE RENEWABLES PLC	Photovoltaic	4.7	33	15/03/2013	TA4 3HA	WPD	South West England	4
AEE RENEWABLES PLC	Photovoltaic	4.0	11	20/03/2015	EX15 2QQ	WPD	South West England	4
AEE RENEWABLES PLC	Photovoltaic	4.3	33	TBC	TBC	SSE	Southern England	4
AEE RENEWABLES PLC	Photovoltaic	9.5	33	TBC	SP11 6PL	SSE	Southern England	4
VOLTALIA UK LTD	Photovoltaic	32.0	33	04/11/2021	BS10 7SE	WPD	South West England	5

Table 9-19: Details of top players of connected offers for onshore wind sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, Onshore wind
INNOGY	Onshore Wind	10.0	33	22/08/2011	CA7 4PZ	ENW	North West England	1
INNOGY	Onshore Wind	6.0	33	01/10/2013	BB11 5QJ	ENW	North West England	1
INNOGY	Onshore Wind	6.0	33	01/10/2013	BB11 5QJ	ENW	North West England	1
INNOGY	Onshore Wind	4.5	33	01/06/2007	BB11 5QQ	ENW	North West England	1
INNOGY	Onshore Wind	57.4	132	01/01/2018	SA31 3PQ	NGED	South Wales	1
INNOGY	Onshore Wind	32.8	132	03/12/2018	SA4 8DX	NGED	South Wales	1
INNOGY	Onshore Wind	3.2	33	TBC	IV2 6UL	SSE	North Scotland	1
BRENIG	Onshore Wind	37.6	33	15/10/2018	LL16 5RN	SPEN	North Wales, Merseyside and Cheshire	2
NANCLACH LIMITED	Onshore Wind	37.1	33	27/02/2019	IV12 5UR	SSE	North Scotland	3
NO INFO.	Onshore Wind	36.0	TBC	01/09/2017	ML12 6ZS	SPEN	South and Central Scotland	4
AUCHROBERT WIND ENERGY LIMITED	Onshore Wind	36.0	33	01/10/2017	ML11 0HP	SPEN	South and Central Scotland	4
NO INFO.	Onshore Wind	50.0	33	01/04/2005	EH42 1RG	SPEN	South and Central Scotland	4
NO INFO.	Onshore Wind	1.5	11	22/09/2016	KY8 5RU	SPEN	South and Central Scotland	4
WIND PROSPECT	Onshore Wind	35.0	33	15/03/2017	DG8 0PE	SPEN	South and Central Scotland	5
WIND PROSPECT	Onshore Wind	26.0	33	29/02/2016	FK1 2JW	SPEN	South and Central Scotland	5
WIND PROSPECT	Onshore Wind	18.0	33	26/04/2006	KA24 5HR	SPEN	South and Central Scotland	5

Table 9-20: Details of top players of connected offers for other technology sites

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, Others
CONRAD	Others	42.1	33	19/03/2020	PR2 5NQ	ENW	North West England	1
CONRAD	Others	20.0	33	22/10/2020	FY2 0JF	ENW	North West England	1
CONRAD	Others	0.0	33	22/02/2017	GL2 5HS	NGED	West Midlands	1
CONRAD	Others	19.3	11	22/01/2021	WV14 9NA	NGED	West Midlands	1
CONRAD	Others	19.3	11	22/01/2021	WV14 9NA	NGED	West Midlands	1
CONRAD	Others	40.1	33	05/12/2017	SA5 4SF	NGED	South Wales	1
CONRAD	Others	6.4	11	23/10/2015	TA6 4DR	NGED	South West England	1
CONRAD	Others	20.1	33	15/08/2016	EX2 8EE	NGED	South West England	1
CONRAD	Others	21.0	33	01/08/2017	TQ2 8JG	NGED	South West England	1
CONRAD	Others	15.4	33	01/06/2017	PL4 0SF	NGED	South West England	1
CONRAD	Others	5.0	11	01/06/2020	PL7 1RF	NGED	South West England	1
CONRAD	Others	4.3	11	14/09/2020	PL7 5ET	NGED	South West England	1
CONRAD	Others	7.3	11	03/02/2022	TA24 5BY	NGED	South West England	1
CONRAD	Others	7.1	11	TBC	SN11 9BS	SSE	Southern England	1
CONRAD	Others	6.8	TBC	08/09/2020	SN12 8LQ	SSE	Southern England	1
CONRAD	Others	15.2	11	TBC	BA21 5HA	SSE	Southern England	1
CONRAD	Others	6.0	11	11/09/2019	CM5 0JR	UKPN	East England	1
CONRAD	Others	7.5	11	18/03/2021	CM13 3SS	UKPN	East England	1
CONRAD	Others	6.0	11	23/07/2019	MK45 5BP	UKPN	East England	1
CONRAD	Others	7.2	11	17/02/2022	PE7 3GP	UKPN	East England	1
CONRAD	Others	6.1	11	01/10/2021	LU5 6HT	UKPN	East England	1
UK POWER RESERVE	Others	20.0	33	14/07/2017	OL9 9EY	ENW	North West England	2
UK POWER RESERVE	Others	10.0	11	01/02/2002	M22 5YA	ENW	North West England	2
UK POWER RESERVE	Others	18.0	33	14/10/2017	M44 5AX	ENW	North West England	2
UK POWER RESERVE	Others	20.0	33	14/03/2017	M31 4QN	ENW	North West England	2
UK POWER RESERVE	Others	17.5	33	01/10/2018	WA12 0HN	ENW	North West England	2
UK POWER RESERVE	Others	20.0	33	14/10/2017	SK16 4RE	ENW	North West England	2
UK POWER RESERVE	Others	25.0	132	27/07/2000	LE14 3RD	NGED	East Midlands	2
UK POWER RESERVE	Others	9.9	33	01/01/2000	TA3 6RX	NGED	South West England	2
UK POWER RESERVE	Others	24.0	33	03/03/2017	DN40ï¿½ï¿	NPG	Yorkshire	2
UK POWER RESERVE	Others	20.0	33	TBC	WA4 1PD	SPEN	North Wales, Merseyside and Cheshire	2
UK POWER RESERVE	Others	7.5	11	TBC	WA9 5EA	SPEN	North Wales, Merseyside and Cheshire	2
UK POWER RESERVE	Others	20.0	11	12/04/2017	HP2 7DU	UKPN	East England	2
UK POWER RESERVE	Others	20.0	11	05/04/2017	N17 0QJ	UKPN	East England	2
UK POWER RESERVE	Others	4.6	11	12/01/2015	TN24 0GP	UKPN	South East England	2
UK POWER RESERVE	Others	10.0	11	06/06/2002	TN24 0GP	UKPN	South East England	2
MERCIA POWER	Others	6.1	11	01/12/2018	SK13 1QH	ENW	North West England	3
MERCIA POWER	Others	3.0	11	09/03/2021	NG19 9BG	NGED	East Midlands	3
MERCIA POWER	Others	7.0	11	15/06/2018	NG9 6DH	NGED	East Midlands	3
MERCIA POWER	Others	5.2	11	04/09/2018	NG4 2BD	NGED	East Midlands	3
MERCIA POWER	Others	4.0	11	03/08/2018	S80 1RA	NGED	East Midlands	3
MERCIA POWER	Others	16.0	33	28/09/2018	NG4 2JU	NGED	East Midlands	3
MERCIA POWER	Others	14.0	33	04/12/2018	DE5 3SW	NGED	East Midlands	3
MERCIA POWER	Others	7.2	11	13/12/2018	S80 3ET	NGED	East Midlands	3
MERCIA POWER	Others	7.2	11	01/10/2019	DE7 8EF	NGED	East Midlands	3
MERCIA POWER	Others	8.9	11	01/12/2019	S43 2PR	NGED	East Midlands	3
MERCIA POWER	Others	4.3	11	01/11/2020	DE14 2DW	NGED	East Midlands	3
MERCIA POWER	Others	4.0	11	01/10/2020	DE14 2DW	NGED	East Midlands	3
MERCIA POWER	Others	5.7	11	30/11/2021	NG17 2NB	NGED	East Midlands	3
MERCIA POWER	Others	4.5	11	01/04/2021	NG17 2NB	NGED	East Midlands	3
MERCIA POWER	Others	25.0	66	01/04/2016	DY10 4JB	NGED	West Midlands	3
MERCIA POWER	Others	8.0	11	01/12/2019	B7 5TR	NGED	West Midlands	3
UK UTILITY RESERVE LIMITED	Others	20.0	33	31/10/2018	MK1 1EX	NGED	East Midlands	4
UK UTILITY RESERVE LIMITED	Others	40.0	33	16/03/2019	DE21 7ZS	NGED	East Midlands	4
UK UTILITY RESERVE LIMITED	Others	20.0	33	08/10/2018	SA12 6HQ	NGED	South Wales	4
UK UTILITY RESERVE LIMITED	Others	20.0	33	28/08/2018	TQ4 7QL	NGED	South West England	4
SALTHOLME GAS	Others	50.0	132	29/01/2021	TS23 4EX	NPG	North East England	5
SALTHOLME GAS	Others	50.0	132	29/01/2021	TS23 4EX	NPG	North East England	5
UK UTILITY RESERVE LIMITED	Others	20	33	31/10/2018	MK1 1EX	NGED	East Midlands	5
UK UTILITY RESERVE LIMITED	Others	40.0	33	16/03/2019	DE21 7ZS	NGED	East Midlands	5
UK UTILITY RESERVE LIMITED	Others	20	33	08/10/2018	SA12 6HQ	NGED	South Wales	5
UK UTILITY RESERVE LIMITED	Others	20.0	33	28/08/2018	TQ4 7QL	NGED	South West England	5

Appendix E: Top Players of Accepted Offers by Year

Table 9-21: Details of top players of accepted offers in 2018

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2018
EEB	Photovoltaic	25.0	33	12/01/2018	MK18 3ND	NGED	East Midlands	1
EEB	Photovoltaic	40.0	132	02/02/2018	NN14 3NB	NGED	East Midlands	1
EEB	Photovoltaic	40.0	132	20/04/2018	MK17 0PG	NGED	East Midlands	1
EEB	Photovoltaic	20.0	33	08/12/2018	MK19 6BZ	NGED	East Midlands	1
BALANCED GRID SOLUTIONS	Battery	49.0	132	23/02/2018	TN33 9BL	UKPN	South East England	2
BALANCED GRID SOLUTIONS	Battery	49.9	132	19/11/2018	TBC	UKPN	South East England	2
JBM	Photovoltaic	35.0	132	08/08/2018	EX15 1RF	NGED	South West England	3
JBM	Photovoltaic	49.9	132	28/11/2018	TR8 4LX	NGED	South West England	3
AURA POWER	Photovoltaic	30.0	33	08/08/2018	TR14 0PL	NGED	South West England	4
AURA POWER	Photovoltaic	50.0	132	08/08/2018	EX15 2NH	NGED	South West England	4
ORKNEY ISLANDS COUNCIL	Onshore Win	66.0	33	17/07/2018	KW16 3NW	SSE	North Scotland	5
ORKNEY ISLANDS COUNCIL	Onshore Win	7.5	11	18/07/2018	KW15 1RR	SSE	North Scotland	5
AURA POWER	Photovoltaic	50.0	132	08/08/2018	EX15 2NH	WPD	South West England	5

Table 9-22: Details of top players of accepted offers in 2019

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2019
DNO CONSULTING	Photovoltaic	32.6	TBC	11/07/2019	DT8 3HS	SSE	Southern England	1
DNO CONSULTING	Others	125.2	TBC	28/05/2019	SL6 3SS	SSE	Southern England	1
DNO CONSULTING	Photovoltaic	9.9	33	24/09/2019	PH2 9LX	SSE	North Scotland	1
DNO CONSULTING	Photovoltaic	9.9	33	24/09/2019	PH2 9LN	SSE	North Scotland	1
DNO CONSULTING	Photovoltaic	50.0	132	07/03/2019	SG9 0JB	UKPN	East England	1
DNO CONSULTING	Others	99.9	132	04/06/2019	CM19 5JY	UKPN	East England	1
LIGHTSOURCE	Photovoltaic	3.8	11	12/07/2019	PR5 0XD	ENW	North West England	2
LIGHTSOURCE	Photovoltaic	49.9	33	02/01/2019	DN22 9JH	NGED	East Midlands	2
LIGHTSOURCE	Photovoltaic	49.9	132	08/01/2019	NG22 8TN	NGED	East Midlands	2
LIGHTSOURCE	Photovoltaic	33.7	132	11/09/2019	NG22 8PF	NGED	East Midlands	2
LIGHTSOURCE	Photovoltaic	50.0	132	27/11/2019	NG32 2HU	NGED	East Midlands	2
LIGHTSOURCE	Photovoltaic	40.0	TBC	21/08/2019	SP4 0DR	SSE	Southern England	2
LOW CARBON	Photovoltaic	20.0	33	11/06/2019	NN13 5QG	NGED	East Midlands	3
LOW CARBON	Photovoltaic	20.0	33	24/05/2019	S43 3YH	NGED	East Midlands	3
LOW CARBON	Photovoltaic	40.0	33	02/10/2019	CV47 2SL	NGED	East Midlands	3
LOW CARBON	Photovoltaic	20.0	33	18/12/2019	CF62 3BJ	NGED	South Wales	3
LOW CARBON	Photovoltaic	50.0	TBC	10/09/2019	OX44 7LF	SSE	Southern England	3
LOW CARBON	Photovoltaic	15.0	11	23/04/2019	OX25 1NX	SSE	Southern England	3
LOW CARBON	Photovoltaic	15.0	33	13/08/2019	CM3 4AS	UKPN	East England	3
LOW CARBON	Photovoltaic	1.7	11	29/10/2019	AL10 9TX	UKPN	East England	3
LOW CARBON	Photovoltaic	20.0	33	20/12/2019	CM6 2QY	UKPN	East England	3
JBM	Photovoltaic	59.9	132	15/02/2019	NG25 0QR	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	06/02/2019	WR9 0QB	NGED	West Midlands	4
JBM	Photovoltaic	38.0	0.4	08/10/2019	NG13 0FD	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	11/12/2019	WR15 8LG	NGED	West Midlands	4
EEB	Photovoltaic	40.0	132	04/02/2019	GL18 1JX	NGED	West Midlands	5
EEB	Photovoltaic	40.0	132	02/04/2019	TA7 9BQ	NGED	South West England	5
EEB	Photovoltaic	75.0	132	20/05/2019	CF32 0NW	NGED	South Wales	5
EEB	Photovoltaic	35.0	33	16/07/2019	EX11 1LU	NGED	South West England	5
LOW CARBON	Photovoltaic	20.0	33	18/12/2019	CF62 3BJ	WPD	South Wales	5
LOW CARBON	Photovoltaic	50.0	TBC	10/09/2019	OX44 7LF	SSE	Southern England	5
LOW CARBON	Photovoltaic	15.0	11	23/04/2019	OX25 1NX	SSE	Southern England	5

Table 9-23: Details of top players of accepted offers in 2020

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2020
LOW CARBON	Photovoltaic	14.3	33	22/01/2020	MK18 2JW	NGED	East Midlands	1
LOW CARBON	Photovoltaic	35.0	33	13/10/2020	LE10 3EE	NGED	East Midlands	1
LOW CARBON	Photovoltaic	20.0	TBC	11/09/2020	SP8 5JG	SSE	Southern England	1
LOW CARBON	Photovoltaic	45.5	TBC	25/09/2020	OX27 0AD	SSE	Southern England	1
LOW CARBON	Photovoltaic	15.0	TBC	09/10/2020	TBC	SSE	Southern England	1
LOW CARBON	Photovoltaic	50.0	TBC	27/10/2020	BA11 6QQ	SSE	Southern England	1
LOW CARBON	Photovoltaic	20.0	TBC	07/12/2020	OX9 7BT	SSE	Southern England	1
LOW CARBON	Photovoltaic	20.0	33	17/02/2020	CM9 6GT	UKPN	East England	1
LOW CARBON	Photovoltaic	49.9	132	09/04/2020	CM23 1BJ	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	29/04/2020	CO16 0HN	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	33	09/04/2020	CM77 8DS	UKPN	East England	1
LOW CARBON	Photovoltaic	49.9	132	12/06/2020	CM2 8UN	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	132	18/09/2020	CM6 2QY	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	33	21/08/2020	IP13 9AD	UKPN	East England	1
LOW CARBON	Photovoltaic	30.0	33	10/11/2020	HP27 9QX	UKPN	East England	1
LOW CARBON	Photovoltaic	70.0	132	14/08/2020	CO2 0EJ	UKPN	East England	1
SOLAR CENTURY	Photovoltaic	69.4	132	25/11/2020	TR27 5LA	NGED	South West England	2
SOLAR CENTURY	Photovoltaic	57.0	132	13/11/2020	TBC	NGED	South West England	2
SOLAR CENTURY	Photovoltaic	120.0	132	02/12/2020	B40 5EU	NGED	South West England	2
SOLAR CENTURY	Photovoltaic	90.0	132	26/06/2020	IP8 4LB	UKPN	East England	2
SOLAR CENTURY	Photovoltaic	90.0	132	15/09/2020	CB23 8BB	UKPN	East England	2
JBM	Photovoltaic	49.9	132	09/04/2020	NN13 6DZ	NGED	East Midlands	3
JBM	Battery	49.9	132	11/06/2020	MK18 3NF	NGED	East Midlands	3
JBM	Photovoltaic	45.0	132	03/04/2020	GL20 7BS	NGED	West Midlands	3
JBM	Photovoltaic	49.9	132	14/07/2020	GL18 1HG	NGED	West Midlands	3
JBM	Photovoltaic	49.9	132	19/08/2020	CV34 7BN	NGED	East Midlands	3
JBM	Photovoltaic	25.0	33	19/08/2020	CV47 2ST	NGED	East Midlands	3
JBM	Photovoltaic	49.9	132	09/10/2020	WS15 3RE	NGED	West Midlands	3
JBM	Photovoltaic	0.0	TBC	05/10/2020	SN6 7SE	SSE	Southern England	3
DNO CONSULTING	Photovoltaic	40.0	132	16/01/2020	ST18 9BU	NGED	West Midlands	4
DNO CONSULTING	Photovoltaic	20.0	33	24/03/2020	CF38 1SL	NGED	South Wales	4
DNO CONSULTING	Photovoltaic	26.0	66	26/05/2020	CV37 8LB	NGED	West Midlands	4
DNO CONSULTING	Photovoltaic	40.0	132	01/06/2020	GL2 7EF	NGED	West Midlands	4
DNO CONSULTING	Others	105.2	33	04/03/2020	SN12 7QG	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	12.6	11	17/01/2020	RG2 9JX	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	20.0	TBC	21/12/2020	DT2 0EB	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	15.0	33	10/02/2020	NR20 3EW	UKPN	East England	4
AURA POWER	Photovoltaic	49.9	132	14/04/2020	GL13 9TQ	NGED	West Midlands	5
AURA POWER	Photovoltaic	49.9	132	14/04/2020	ST18 0XB	NGED	West Midlands	5
AURA POWER	Photovoltaic	49.9	132	27/08/2020	ST19 5RA	NGED	West Midlands	5
AURA POWER	Photovoltaic	49.9	132	12/10/2020	WS15 3NP	NGED	West Midlands	5
AURA POWER	Photovoltaic	20.0	33	18/03/2020	SS6 9TU	UKPN	East England	5
AURA POWER	Photovoltaic	30.0	33	30/10/2020	IP21 4AB	UKPN	East England	5

Table 9-24: Details of top players of accepted offers in 2021

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2021
LOW CARBON	Battery	35.0	132	07/01/2021	GL13 9ED	NGED	West Midlands	1
LOW CARBON	Photovoltaic	23.0	33	14/05/2021	WV7 3AT	NGED	West Midlands	1
LOW CARBON	Photovoltaic	30.0	33	28/06/2021	S43 3YH	NGED	East Midlands	1
LOW CARBON	Photovoltaic	50.0	33	21/10/2021	NG32 2DF	NGED	East Midlands	1

Table 9-25: Details of top players of accepted offers in 2021 (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2021
LOW CARBON	Photovoltaic	35.0	33	01/10/2021	EX15 2PJ	NGED	South West England	1
LOW CARBON	Photovoltaic	100.0	TBC	04/08/2021	SN12 7QQ	SSE	Southern England	1
LOW CARBON	Photovoltaic	50.0	33	26/03/2021	PE32 2LW	UKPN	East England	1
LOW CARBON	Photovoltaic	12.0	33	11/03/2021	CB11 3JT	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	33	30/06/2021	CM19 5HE	UKPN	East England	1
LOW CARBON	Photovoltaic	25.0	33	25/05/2021	CM16 7QQ	UKPN	East England	1
LOW CARBON	Photovoltaic	40.0	132	26/07/2021	SS4 3LT	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	30/06/2021	IP14 5BL	UKPN	East England	1
LOW CARBON	Photovoltaic	35.0	132	07/06/2021	CO7 7SN	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	19/07/2021	HP5 3PD	UKPN	East England	1
LOW CARBON	Battery	5.0	33	12/08/2021	CM2 7RY	UKPN	East England	1
LOW CARBON	Photovoltaic	20.0	33	14/10/2021	RH13 8DX	UKPN	South East England	1
LOW CARBON	Photovoltaic	14.0	33	22/12/2021	RH13 8DL	UKPN	South East England	1
BLUESTONE ENERG\	Photovoltaic	40.0	33	12/06/2021	LE15 8RU	NGED	East Midlands	2
BLUESTONE ENERG\	Photovoltaic	25.0	33	12/05/2021	TR16 5UN	NGED	South West England	2
BLUESTONE ENERG\	Battery	98.0	132	29/12/2021	CV2 1NQ	NGED	East Midlands	2
BLUESTONE ENERG\	Photovoltaic	42.8	66	06/04/2021	DL13 5AW	NPG	North East England	2
BLUESTONE ENERG\	Battery	150.0	TBC	30/09/2021	SN12 8LW	SSE	Southern England	2
BLUESTONE ENERG\	Photovoltaic	98.0	132	10/11/2021	CM6 3NJ	UKPN	East England	2
BLUESTONE ENERG\	Battery	40.0	132	14/10/2021	RM14 3JD	UKPN	East England	2
ANGLO	Photovoltaic	20.0	33	15/03/2021	PR4 3RS	ENW	North West England	3
ANGLO	Battery	50.0	132	25/02/2021	B46 1PB	NGED	West Midlands	3
ANGLO	Battery	49.9	132	23/04/2021	B62 0HJ	NGED	West Midlands	3
ANGLO	Photovoltaic	49.9	132	04/06/2021	BS36 2NY	NGED	South West England	3
ANGLO	Battery	49.9	132	13/09/2021	ST18 9AH	NGED	West Midlands	3
ANGLO	Battery	49.9	132	29/10/2021	B76 0BE	NGED	West Midlands	3
ANGLO	Battery	49.5	132	07/12/2021	BS37 9TY	NGED	West Midlands	3
ANGLO	Battery	54.0	TBC	11/10/2021	SO16 0YE	SSE	Southern England	3
ANGLO	Photovoltaic	6.0	11	14/02/2021	PE28 0LB	UKPN	East England	3
ANGLO	Photovoltaic	20.0	33	25/03/2021	CM3 8RS	UKPN	East England	3
ANGLO	Battery	49.9	132	17/05/2021	SS15 4BG	UKPN	East England	3
JBM	Photovoltaic	49.9	132	27/01/2021	LE9 9NB	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	29/01/2021	DE55 6HA	NGED	East Midlands	4
JBM	Photovoltaic	49.9	132	20/04/2021	BS24 6TL	NGED	South West England	4
JBM	Battery	35.0	132	01/04/2021	EX15 1RF	NGED	South West England	4
JBM	Photovoltaic	30.0	132	20/04/2021	BS49 5JN	NGED	South West England	4
JBM	Photovoltaic	49.9	132	05/07/2021	WR13 6PD	NGED	West Midlands	4
JBM	Photovoltaic	30.0	33	19/11/2021	TF6 6BP	NGED	West Midlands	4
JBM	Battery	49.9	132	07/10/2021	WR13 5BA	NGED	West Midlands	4
JBM	Photovoltaic	35.0	TBC	13/10/2021	OX29 6UP	SSE	Southern England	4
JBM	Battery	47.4	132	26/02/2021	ME9 8QG	UKPN	South East England	4
INNOVA	Photovoltaic	23.8	33	15/02/2021	PE24 5AY	NGED	East Midlands	5
INNOVA	Photovoltaic	20.0	33	21/04/2021	MK17 0NF	NGED	East Midlands	5
INNOVA	Battery	49.9	132	20/05/2021	HR9 6AX	NGED	West Midlands	5
INNOVA	Photovoltaic	149.8	132	22/12/2021	TF6 6NF	NGED	West Midlands	5
INNOVA	Photovoltaic	60.0	33	06/12/2021	LE67 1FF	NGED	East Midlands	5
INNOVA	Others	20.9	TBC	10/09/2021	SO21 2JH	SSE	Southern England	5
INNOVA	Photovoltaic	22.5	33	15/03/2021	IP10 1PW	UKPN	East England	5
INNOVA	Photovoltaic	49.9	132	26/08/2021	CB25 9AT	UKPN	East England	5
DNO CONSULTING	Photovoltaic	50.0	11	24/06/2021	BH23 6BB	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	20.0	11	01/09/2021	RG27 0LE	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	20.0	11	09/09/2021	OX12 8JA	SSE	Southern England	4

Table 9-26: Details of top players of accepted offers in 2021 (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2021
DNO CONSULTING	Others	99.8	TBC	07/10/2021	OX9 2NR	SSE	Southern England	4
DNO CONSULTING	Battery	8.6	11	03/11/2021	SP3 5RP	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	12.0	11	05/11/2021	SO51 9AG	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	15.0	11	09/12/2021	PO22 9UP	SSE	Southern England	4
DNO CONSULTING	Photovoltaic	30.0	TBC	02/12/2021	SO21 2QU	SSE	Southern England	4
INNOVA	Photovoltaic	25.0	33	15/01/2021	CV2 1NR	WPD	East Midlands	5
INNOVA	Photovoltaic	40.0	132	25/02/2021	GL10 3TH	WPD	West Midlands	5
INNOVA	Photovoltaic	23.8	33	15/02/2021	PE24 5AY	WPD	East Midlands	5
INNOVA	Photovoltaic	20.0	33	21/04/2021	MK17 0NF	WPD	East Midlands	5
INNOVA	Battery	49.9	132	20/05/2021	HR9 6AX	WPD	West Midlands	5
INNOVA	Photovoltaic	40.0	132	16/06/2021	GL10 3TH	WPD	West Midlands	5
INNOVA	Photovoltaic	149.8	132	22/12/2021	TF6 6NF	WPD	West Midlands	5
INNOVA	Battery	49.9	132	13/09/2021	WS15 3NX	WPD	West Midlands	5
INNOVA	Photovoltaic	60.0	33	06/12/2021	LE67 1FF	WPD	East Midlands	5
INNOVA	Photovoltaic	20.9	TBC	05/03/2021	SO21 2JH	SSE	Southern England	5
INNOVA	Others	20.9	TBC	10/09/2021	SO21 2JH	SSE	Southern England	5
INNOVA	Photovoltaic	10.5	11	09/09/2021	PO18 0PD	SSE	Southern England	5

Table 9-27: Details of top players of accepted offers in 2022

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2022
BLUESTONE ENERGY	Photovoltaic	49.9	132	23/03/2022	B92 0DT	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	09/03/2022	NG13 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	49.9	132	05/05/2022	NG13 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	98.0	132	04/08/2022	B76 0BJ	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	30.0	132	16/09/2022	LE8 0QS	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	3.5	33	06/10/2022	LE15 8RU	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	1.1	11	18/10/2022	SA67 8DE	NGED	South Wales	1
BLUESTONE ENERGY	Photovoltaic	45.0	TBC	18/07/2022	SN12 8NW	SSE	Southern England	1
BLUESTONE ENERGY	Photovoltaic	7.0	33	20/06/2022	CM3 8HS	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	18/10/2022	NR4 6TQ	UKPN	East England	1
BLUESTONE ENERGY	Battery	93.1	132	07/01/2022	KT21 2BU	UKPN	South East England	1
BLUESTONE ENERGY	Photovoltaic	6.0	11	15/11/2022	PL26 7AG	NGED	South West England	1
BLUESTONE ENERGY	Photovoltaic	49.0	132	15/11/2022	CM77 6SN	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	49.0	132	15/11/2022	CM6 3JU	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	25.0	33	15/11/2022	B92 0DJ	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	98.0	132	15/11/2022	DN36 5SG	NPG	Yorkshire	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	40.0	132	15/11/2022	M14 3TQ	UKPN	East England	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	B91 2TH	NGED	West Midlands	1
BLUESTONE ENERGY	Battery	248.0	132	15/11/2022	LN5 0BY	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA3 1HU	SPEN	South and Central Sc	1
BLUESTONE ENERGY	Battery	50.0	33	15/11/2022	PA3 4DF	SPEN	South and Central Sc	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA2 8BJ	SPEN	South and Central Sc	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	FK4 1SN	SPEN	South and Central Sc	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	PA2 7DA	SPEN	South and Central Sc	1
BLUESTONE ENERGY	Photovoltaic	46.0	132	15/11/2022	NP18 1HU	NGED	South Wales	1
BLUESTONE ENERGY	Photovoltaic	7.0	11	15/11/2022	CM3 8EB	UKPN	East England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	G3 8YW	SPEN	South and Central Sc	1

Table 9-28: Details of top players of accepted offers in 2022 (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2022
BLUESTONE ENERGY	Photovoltaic	4.0	33	15/11/2022	G3 8YW	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	BH22 0NF	SSE	Southern England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	KT10 7LH	UKPN	South East England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	G74 4GY	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	KT15 3PS	UKPN	South East England	1
BLUESTONE ENERGY	Photovoltaic	4.0	11	15/11/2022	PA11 3RN	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Photovoltaic	50.0	33	15/11/2022	G23 5HD	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	ME3 8QQ	UKPN	South East England	1
BLUESTONE ENERGY	Battery	150.0	132	15/11/2022	WA7 4XT	SPEN	North Wales, Mersey	1
BLUESTONE ENERGY	Photovoltaic	4.0	33	15/11/2022	LE15 8SA	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	30.0	33	15/11/2022	LE8 0QT	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	30.0	33	15/11/2022	LE8 0QT	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	60.0	11	15/11/2022	G72 9UL	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CR4 4HU	UKPN	London	1
BLUESTONE ENERGY	Photovoltaic	40.0	33	15/11/2022	EH17 8SB	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	TN33 9BN	UKPN	South East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CR4 4HU	UKPN	London	1
BLUESTONE ENERGY	Photovoltaic	38.0	132	15/11/2022	CB2 5BP	UKPN	East England	1
BLUESTONE ENERGY	Photovoltaic	50.0	132	15/11/2022	NG31 8HL	NGED	East Midlands	1
BLUESTONE ENERGY	Photovoltaic	180.0	132	15/11/2022	DN36 5SG	NPG	Yorkshire	1
BLUESTONE ENERGY	Photovoltaic	1.0	11	15/11/2022	ML3 0EG	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DN37 7AL	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	33	15/11/2022	NG33 4AB	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	HU8 8DG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	NE16 3BJ	NPG	North East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	RM14 3PH	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	SK15 3BY	ENW	North West England	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	FK2 0YG	SPEN	South and Central Sco	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S61 4QH	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	50.0	33	15/11/2022	SK14 4NL	ENW	North West England	1
BLUESTONE ENERGY	Battery	40.0	33	15/11/2022	LL68 9DW	SPEN	North Wales, Mersey	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DE14 3DP	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	DE14 3DP	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	98.0	132	15/11/2022	NG8 6AL	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S9 1BG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	S9 1BG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	60.0	33	15/11/2022	SK8 5QA	ENW	North West England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	CV4 8LG	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	MK41 0EW	UKPN	East England	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	LS14 1NG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	49.0	33	15/11/2022	LS14 1NG	NPG	Yorkshire	1
BLUESTONE ENERGY	Battery	49.0	33	15/11/2022	CV4 8LG	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	49.0	33	15/11/2022	NG15 0DR	NGED	East Midlands	1
BLUESTONE ENERGY	Battery	240.0	132	15/11/2022	B92 0DX	NGED	West Midlands	1
BLUESTONE ENERGY	Photovoltaic	20.0	132	15/11/2022	B92 0DX	NGED	West Midlands	1
PATHFINDER CLEAN ENERGY	Photovoltaic	40.0	132	21/03/2022	GL2 8LT	NGED	West Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	03/05/2022	TBC	NGED	West Midlands	2
PATHFINDER CLEAN ENERGY	Battery	18.5	33	01/02/2022	B79 0JU	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Battery	119.6	132	13/07/2022	BS35 3SH	NGED	South West England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	TBC	NGED	South West England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	BS39 7SJ	NGED	South West England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	99.0	132	18/03/2022	BA3 4DX	NGED	South West England	2
PATHFINDER CLEAN ENERGY	Photovoltaic	30.0	33	14/10/2022	LE18 3TJ	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	20/10/2022	LE9 4LE	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	199.8	132	16/09/2022	NG11 0JY	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	49.5	132	22/11/2022	DY7 5AR	NGED	West Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	199.8	132	18/11/2022	B78 2EU	NGED	East Midlands	2
PATHFINDER CLEAN ENERGY	Photovoltaic	79.8	132	28/10/2022	CF5 6EZ	NGED	South Wales	2
PATHFINDER CLEAN ENERGY	Photovoltaic	78.0	132	17/01/2022	PE13 4PL	UKPN	East England	2
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	20.5	66	25/02/2022	HR5 3SB	NGED	West Midlands	3

Table 9-29: Details of top players of accepted offers in 2022 (continued)

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Accepted	Site Postcode	DNO	Licence Area	Capacity Rank in Accepted Offers, 2022
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	8.0	33	18/05/2022	EX32 0DX	NGED	South West England	3
GREEN SWITCH CAPITAL LIMITED	Battery	15.0	33	21/06/2022	PL14 3SH	NGED	South West England	3
GREEN SWITCH CAPITAL LIMITED	Battery	49.9	132	04/08/2022	PL21 9LD	NGED	South West England	3
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	23.5	33	12/08/2022	NG19 0JN	NGED	East Midlands	3
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	27.3	33	18/07/2022	B79 0HA,	NGED	East Midlands	3
GREEN SWITCH CAPITAL LIMITED	Battery	15.0	33	19/07/2022	PL17 7HN	NGED	South West England	3
GREEN SWITCH CAPITAL LIMITED	Battery	99.9	132	03/11/2022	WS15 1PT	NGED	West Midlands	3
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	49.9	132	20/01/2022	SS4 3SA	UKPN	East England	3
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	39.5	33	21/02/2022	HP22 4LN	UKPN	East England	3
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	39.5	132	28/02/2022	IP9 2BZ	UKPN	East England	3
GREEN SWITCH CAPITAL LIMITED	Photovoltaic	28.8	33	20/04/2022	CM3 3HY	UKPN	East England	3
GREEN SWITCH CAPITAL LIMITED	Battery	49.9	132	02/08/2022	PE14 7JX	UKPN	East England	3
GREEN SWITCH CAPITAL LIMITED	Battery	240.0	132	08/07/2022	NR16 1JD	UKPN	East England	3
GREEN SWITCH CAPITAL LIMITED	Battery	228.0	132	15/09/2022	NR14 8FL	UKPN	East England	3
GREEN SWITCH CAPITAL LIMITED	Battery	178.1	132	04/10/2022	PE14 7JX	UKPN	East England	3
CONRAD	Battery	24.2	33	16/05/2022	BB1 3ES	ENW	North West England	4
CONRAD	Battery	49.9	132	11/03/2022	TA4 1EJ	NGED	South West England	4
CONRAD	Photovoltaic	49.9	132	23/02/2022	PL12 6PU	NGED	South West England	4
CONRAD	Battery	99.0	132	05/08/2022	ST9 0NB	NGED	West Midlands	4
CONRAD	Photovoltaic	17.2	33	22/03/2022	BS31 2TF	NGED	South West England	4
CONRAD	Battery	70.4	132	27/07/2022	WV10 7JZ	NGED	West Midlands	4
CONRAD	Photovoltaic	7.6	11	09/09/2022	LN6 9BT	NGED	East Midlands	4
CONRAD	Photovoltaic	5.0	11	12/08/2022	LN6 9BT	NGED	East Midlands	4
CONRAD	Battery	99.0	132	14/09/2022	CV8 1QB	NGED	East Midlands	4
CONRAD	Battery	99.0	132	07/11/2022	B65 9DS	NGED	West Midlands	4
CONRAD	Photovoltaic	49.9	TBC	04/03/2022	PO17 5PQ	SSE	Southern England	4
CONRAD	Battery	49.9	TBC	10/03/2022	AB51 0XY	SSE	North Scotland	4
CONRAD	Photovoltaic	4.1	11	06/05/2022	BH23 6SE	SSE	Southern England	4
CONRAD	Battery	25.3	TBC	06/05/2022	SN12 8LT	SSE	Southern England	4
CONRAD	Others	7.6	11	07/08/2022	SO31 5FS	SSE	Southern England	4
CONRAD	Others	5.3	11	22/03/2022	PO9 1JW	SSE	Southern England	4
CONRAD	Photovoltaic	49.9	TBC	05/10/2022	GU34 3AB	SSE	Southern England	4
CONRAD	Others	7.0	TBC	12/11/2022	SO22 4BF	SSE	Southern England	4
CONRAD	Battery	99.0	TBC	15/11/2022	SO45 1DT	SSE	Southern England	4
DNO CONSULTING	Battery	50.0	132	06/04/2022	EX5 1LA	NGED	South West England	5
DNO CONSULTING	Battery	99.9	132	09/08/2022	WV4 4XN	NGED	West Midlands	5
DNO CONSULTING	Battery	49.9	132	31/10/2022	EX5 2TG	NGED	South West England	5
DNO CONSULTING	Battery	49.9	11	20/10/2022	B38 9EB	NGED	West Midlands	5
DNO CONSULTING	Battery	99.9	132	01/12/2022	WS7 0LE	NGED	West Midlands	5
DNO CONSULTING	Photovoltaic	12.0	33	22/02/2022	SP7 9LD	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	40.0	TBC	08/04/2022	SO51 6DQ	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	35.0	TBC	18/03/2022	AB42 3EN	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	40.0	TBC	06/05/2022	IV30 8LX	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	99.8	TBC	06/05/2022	IV30 8NQ	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	99.8	TBC	24/02/2022	OX9 2NR	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	3.5	11	04/05/2022	PO22 9UP	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	12.0	11	10/06/2022	SO51 9AG	SSE	Southern England	5
DNO CONSULTING	Battery	42	TBC	15/09/2022	RG26 5AT	SSE	Southern England	5
DNO CONSULTING	Battery	30.0	TBC	18/09/2022	PH2 9LN	SSE	North Scotland	5
DNO CONSULTING	Photovoltaic	12	11	13/11/2022	SO40 7DX	SSE	Southern England	5
DNO CONSULTING	Photovoltaic	30.0	TBC	19/11/2022	SO21 2QU	SSE	Southern England	5

Appendix F: Top Players of Connected Offers by Year

Table 9-30: Details of top players of connected offers in 2018

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, 2018
CENTRICA	Battery	50.0	132	01/09/2018	LA13 0PQ	ENW	North West England	1
CENTRICA	Others	48.5	132	20/08/2018	PE1 5NT	UKPN	East England	1
INNOGY	Onshore Wind	57.4	132	01/01/2018	SA31 3PQ	NGED	South Wales	2
INNOGY	Onshore Wind	32.8	132	03/12/2018	SA4 8DX	NGED	South Wales	2
UK UTILITY RESERVE LIMITED	Others	20.0	33	31/10/2018	MK1 1EX	NGED	East Midlands	3
UK UTILITY RESERVE LIMITED	Others	20.0	33	08/10/2018	SA12 6HQ	NGED	South Wales	3
UK UTILITY RESERVE LIMITED	Others	20.0	33	28/08/2018	TQ4 7QL	NGED	South West England	3
MERCIA POWER	Others	6.1	11	01/12/2018	SK13 1QH	ENW	North West England	4
MERCIA POWER	Others	7.0	11	15/06/2018	NG9 6DH	NGED	East Midlands	4
MERCIA POWER	Others	5.2	11	04/09/2018	NG4 2BD	NGED	East Midlands	4
MERCIA POWER	Others	4.0	11	03/08/2018	S80 1RA	NGED	East Midlands	4
MERCIA POWER	Others	16.0	33	28/09/2018	NG4 2JU	NGED	East Midlands	4
MERCIA POWER	Others	14.0	33	04/12/2018	DE5 3SW	NGED	East Midlands	4
MERCIA POWER	Others	7.2	11	13/12/2018	S80 3ET	NGED	East Midlands	4
BURN PARK FARM GAS UNITS	Others	49.9	132	01/04/2018	HU16 5SB	NPG	Yorkshire	5

Table 9-31: Details of top players of connected offers in 2019

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, 2019
FERRYBRIDGE MULTI-FUEL	Others	77.0	132	23/10/2019	WF11 8RA	NPG	Yorkshire	1
BURN PARK FARM ENERGY STORAGE	Battery	49.9	132	01/01/2019	HU16 5RZ	NPG	Yorkshire	2
HC ESS4 LIMITED	Battery	49.0	33	09/12/2019	PR2 5NJ	ENW	North West England	3
VIRIDOR	Others	44.4	33	01/09/2019	BS11 0YU	NGED	South West England	4
UK UTILITY RESERVE LIMITED	Others	40.0	33	16/03/2019	DE21 7ZS	NGED	East Midlands	5

Table 9-32: Details of top players of connected offers in 2020

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, 2020
CONRAD	Others	42.1	33	19/03/2020	PR2 5NQ	ENW	North West England	1
CONRAD	Others	20.0	33	22/10/2020	FY2 0JF	ENW	North West England	1
CONRAD	Others	5.0	11	01/06/2020	PL7 1RF	NGED	South West England	1
CONRAD	Others	4.3	11	14/09/2020	PL7 5ET	NGED	South West England	1
CONRAD	Others	6.8	TBC	08/09/2020	SN12 8LQ	SSE	Southern England	1
SOUTH STAFFS WATER COMPANY	Others	37.6	11	08/04/2020	WV15 6HD	NGED	West Midlands	2
SOUTH STAFFS WATER COMPANY	Others	37.6	11	08/04/2020	WV15 6HD	NGED	West Midlands	2
COVANTA ROOKERY	Others	66.4	132	04/11/2020	MK43 9LY	UKPN	East England	3
LONDON POWER ASSOCIATES LTD	Others	65.0	132	22/05/2020	ME10 2FP	UKPN	South East England	4
GREENFIELDS (F) LIMITED	Photovoltaic	53.9	132	01/11/2020	NP18 2AY	NGED	South Wales	5
LONDON POWER ASSOCIATES LTD	Others	65.0	132	22/05/2020	ME10 2FP	UKPN	South East England	5

Table 9-33: Details of top players of connected offers in 2021

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, 2021
SALTHOLME GAS	Others	50.0	132	29/01/2021	TS23 4EX	NPG	North East England	1
SALTHOLME GAS	Others	50.0	132	29/01/2021	TS23 4EX	NPG	North East England	1
CONRAD	Others	19.3	11	22/01/2021	WV14 9NA	NGED	West Midlands	2
CONRAD	Others	19.3	11	22/01/2021	WV14 9NA	NGED	West Midlands	2
CONRAD	Others	7.5	11	18/03/2021	CM13 3SS	UKPN	East England	2
CONRAD	Others	6.1	11	01/10/2021	LU5 6HT	UKPN	East England	2
AURA POWER	Battery	49.9	132	31/10/2021	CB25 0BP	UKPN	East England	3
WORSET LANE GENERATION	Others	49.9	66	19/10/2021	TS27 3BL	NPG	North East England	4
WELSH POWER	Others	14.0	11	12/02/2021	SS7 4PS	UKPN	East England	5
WELSH POWER	Others	20.0	11	29/05/2021	RM20 3NL	UKPN	East England	5
WELSH POWER	Others	14.0	11	04/05/2021	CM9 5FA	UKPN	East England	5

Table 9-34: Details of top players of connected offers in 2022

Customer Name	Technology	Capacity	PoC Voltage (kV)	Date Connected	Site Postcode	DNO	Licence Area	Capacity Rank in Connected Offers, 2022
MINETY SOUTH STORAGE EXPORT	Battery	110.7	TBC	07/01/2022	SN16 9PL	SSE	Southern England	1
COVANTA ENERGY LIMITED	Others	48.6	132	08/07/2022	LE12 9BU	NGED	East Midlands	2
EEB	Photovoltaic	45.6	33	04/08/2022	NG34 8SF	NGED	East Midlands	3
ARL	Battery	18.0	33	16/06/2022	OL11 3HA	ENW	North West England	4
ARL	Battery	21.1	33	27/04/2022	S44 5XQ	NGED	East Midlands	4
DCP 179 DEEMED CAPACITY	Photovoltaic	38.4	0.4	12/05/2022	SY5 9NE	NGED	West Midlands	5

Appendix G: Accepted Offers by Year, Technology, Voltage and Top Players at Individual Licence Area Level

Figure 9-1: Accepted Offers by Year, Technology, Voltage and Top Players in East Midlands

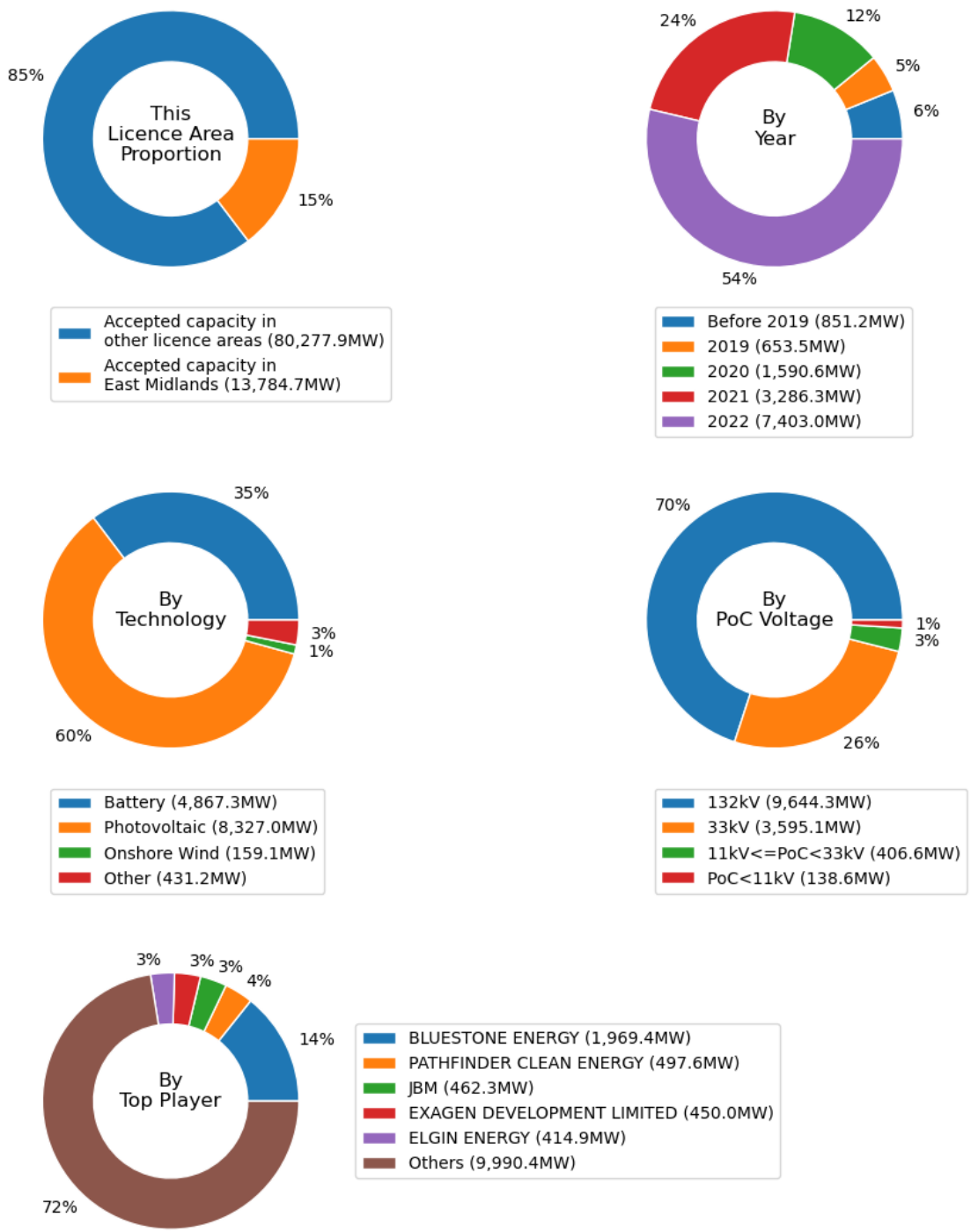


Figure 9-2: Accepted Offers by Year, Technology, Voltage and Top Players in South Wales

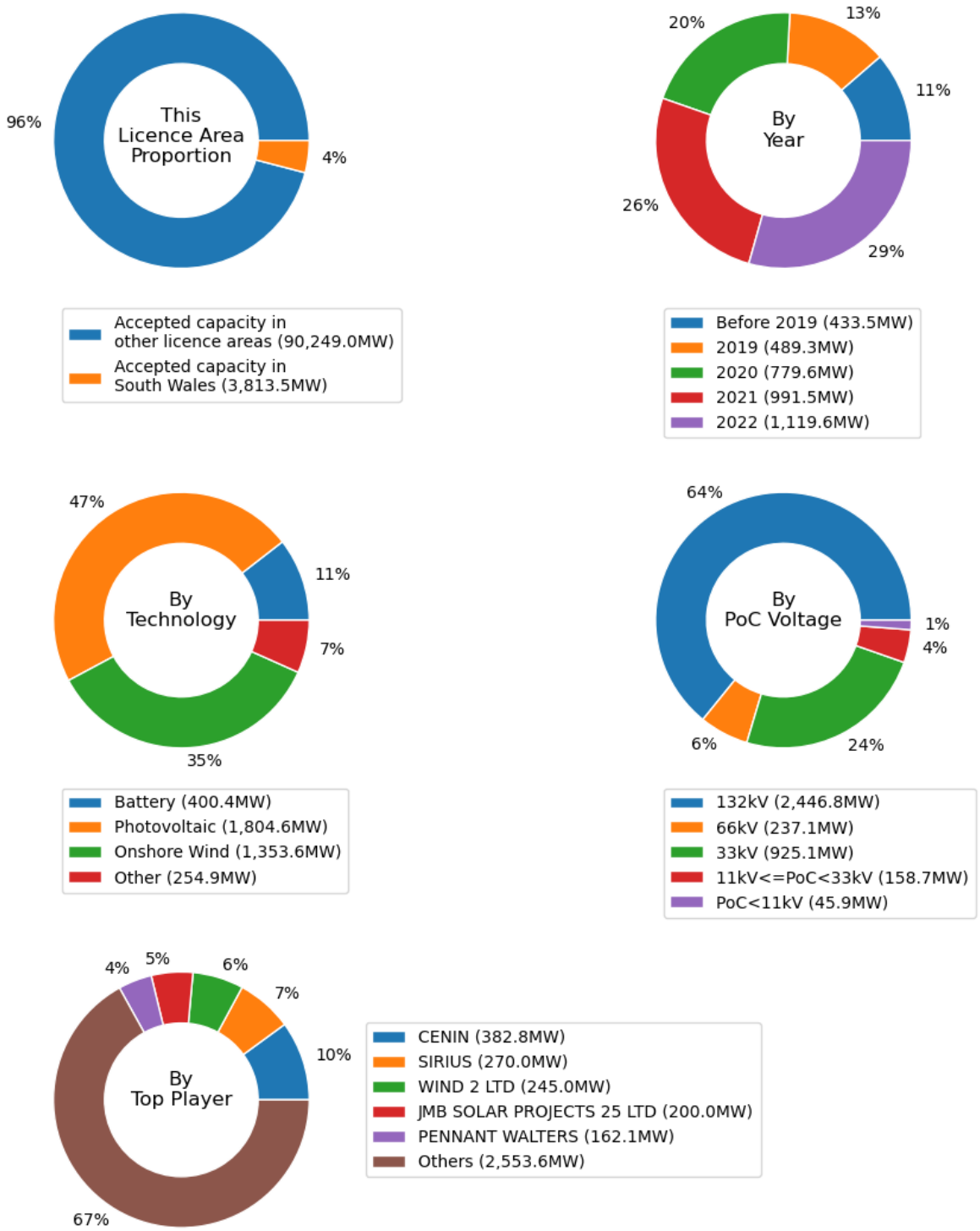


Figure 9-3: Accepted Offers by Year, Technology, Voltage and Top Players in South West England

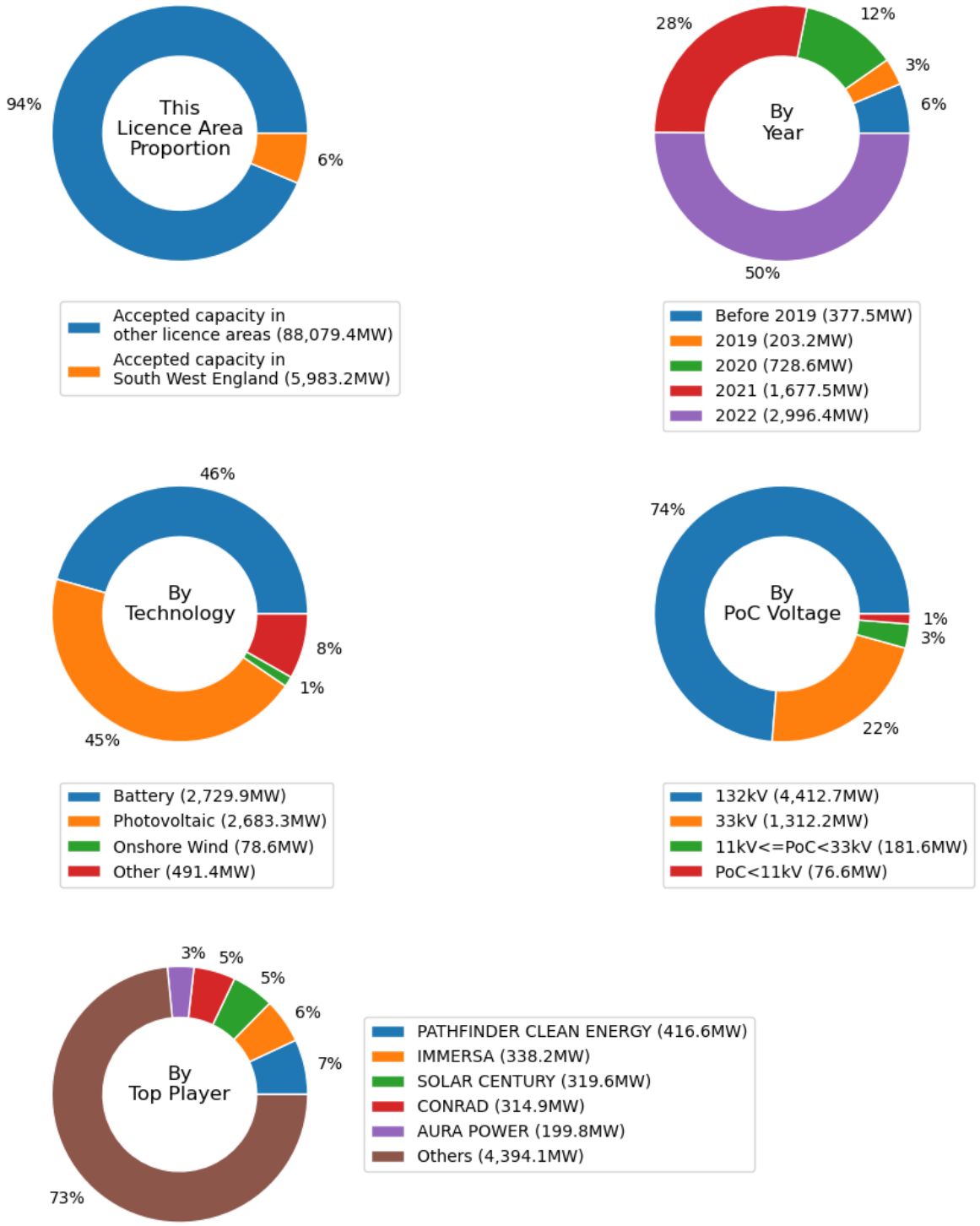


Figure 9-4: Accepted Offers by Year, Technology, Voltage and Top Players in West Midlands

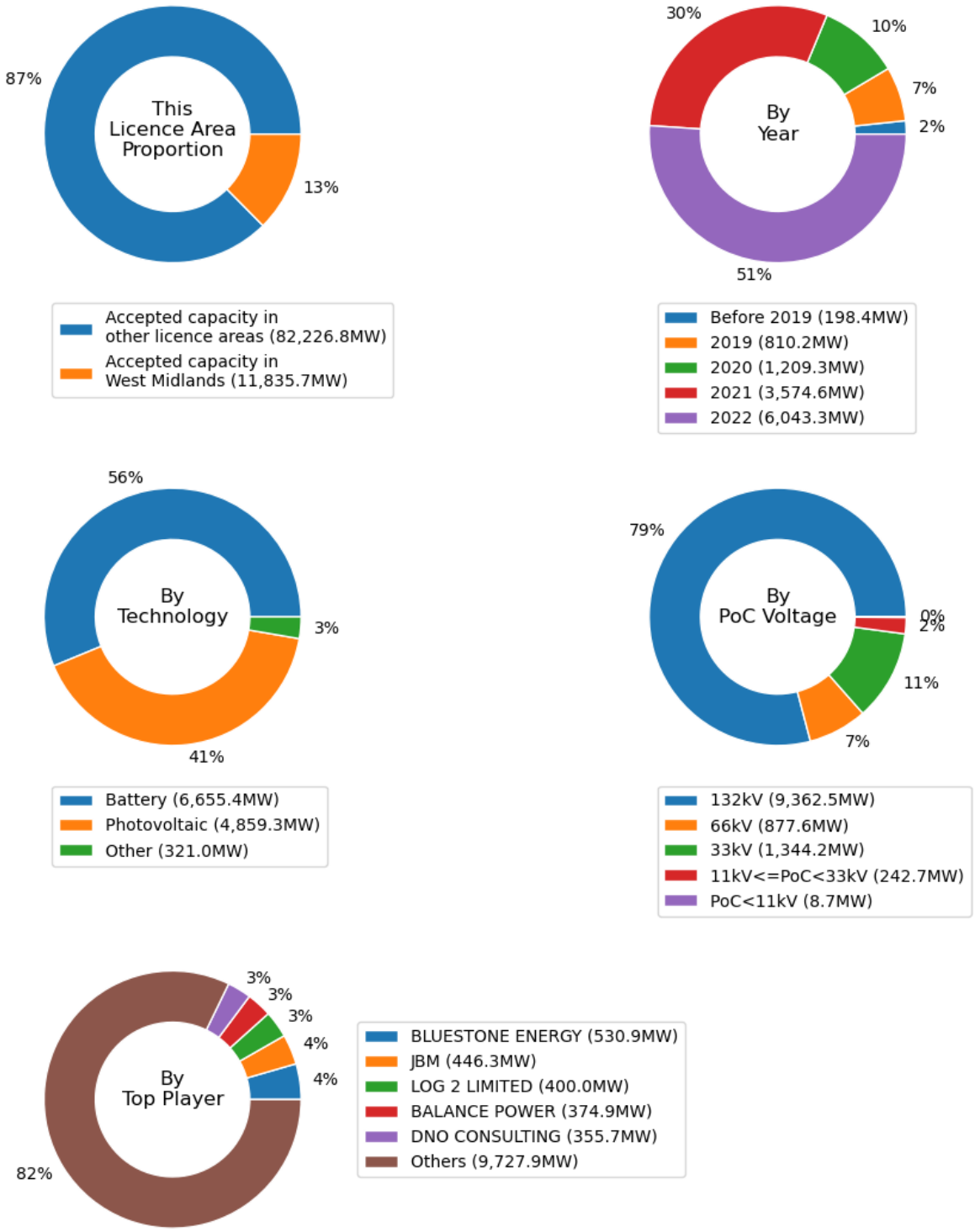


Figure 9-5: Accepted Offers by Year, Technology, Voltage and Top Players in North Scotland

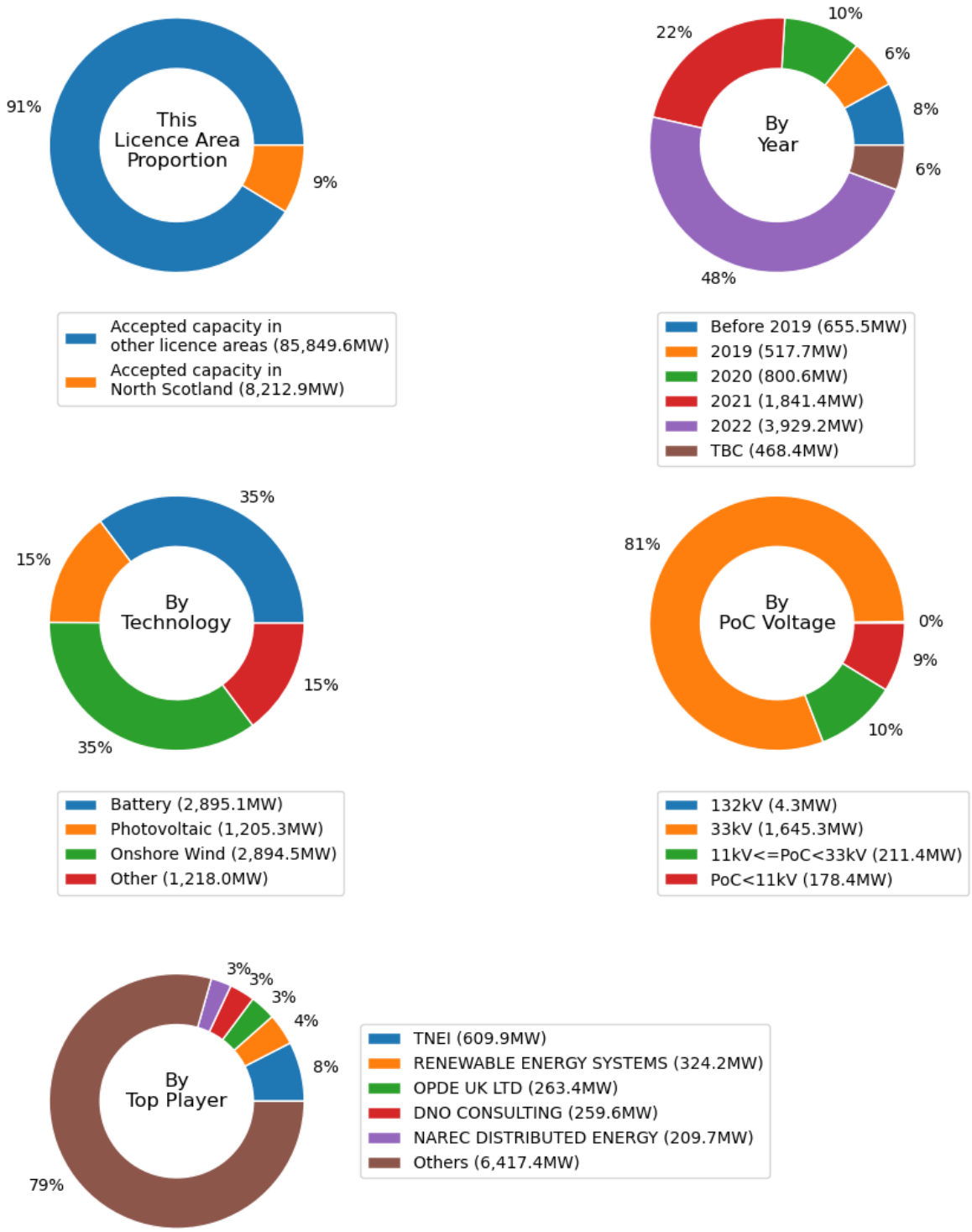


Figure 9-6: Accepted Offers by Year, Technology, Voltage and Top Players in Southern England

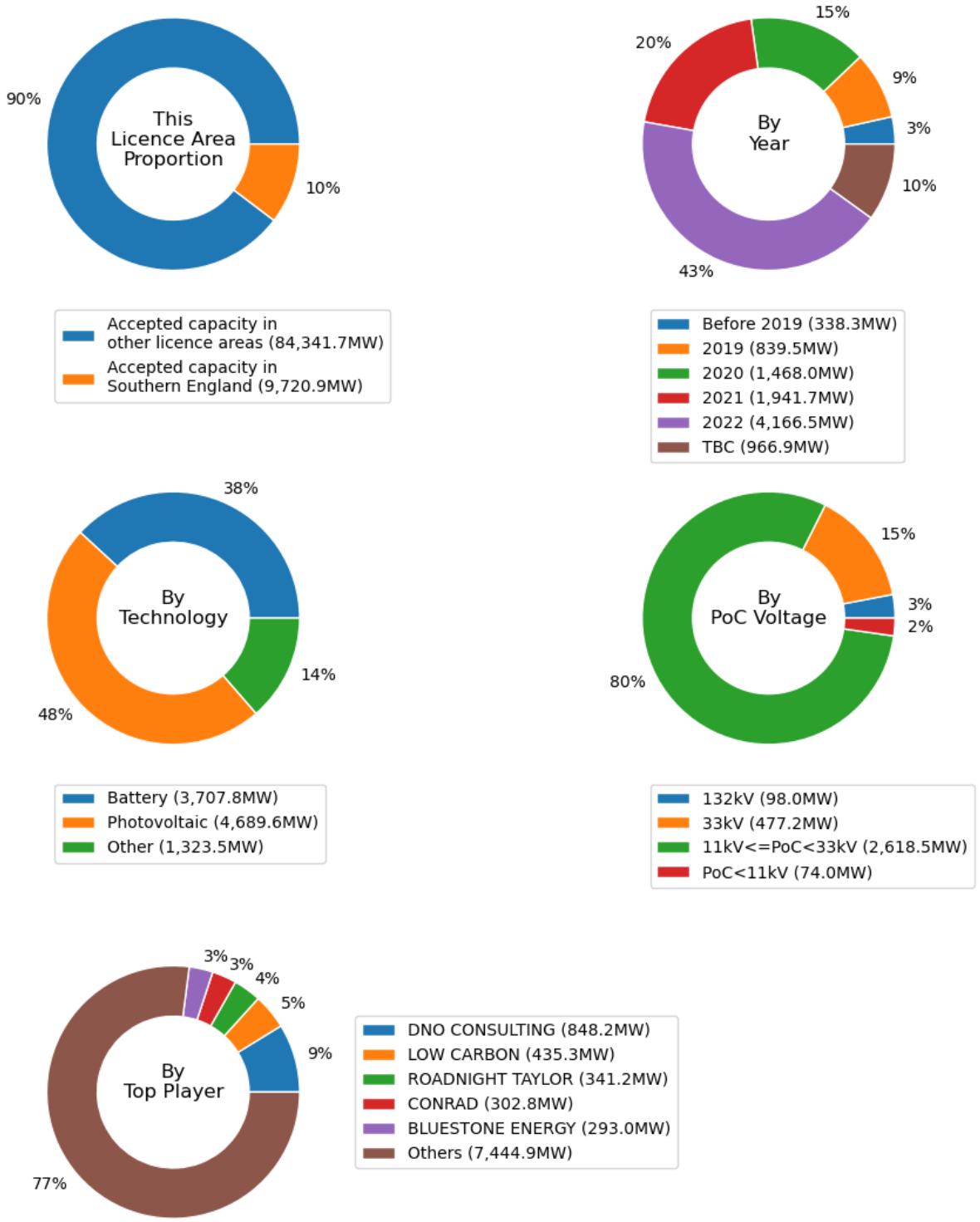


Figure 9-7: Accepted Offers by Year, Technology, Voltage and Top Players in East England

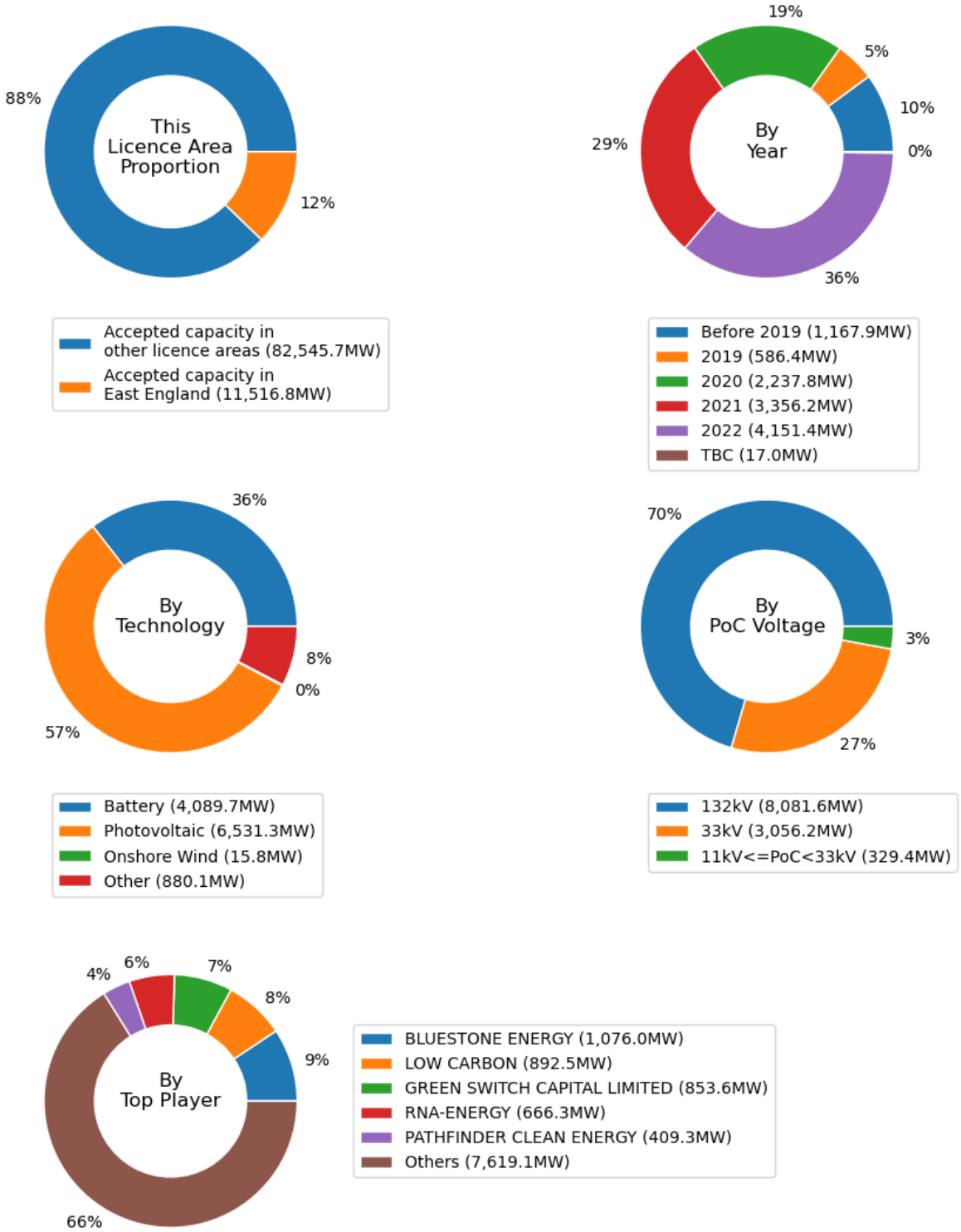


Figure 9-8: Accepted Offers by Year, Technology, Voltage and Top Players in South East England

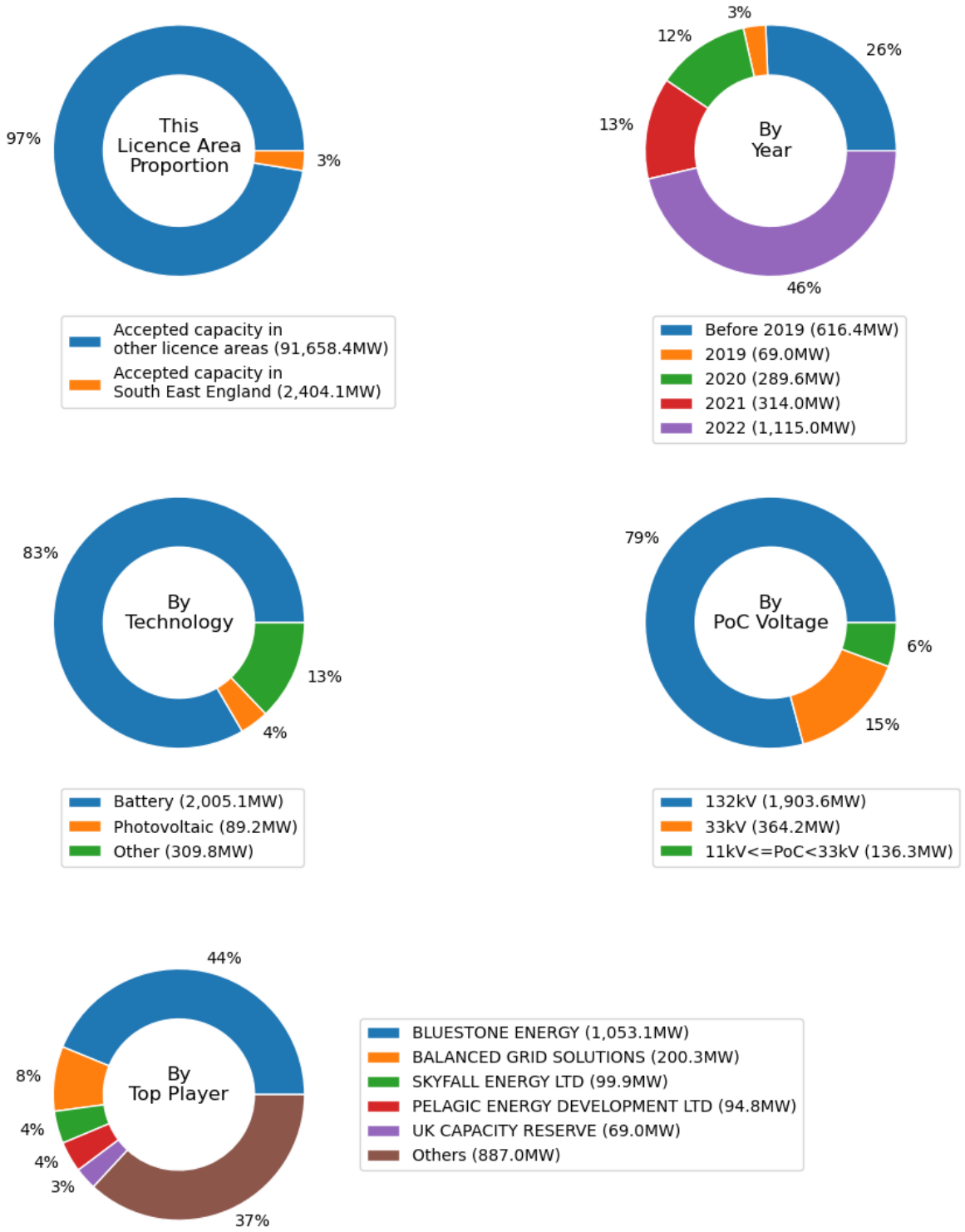


Figure 9-9: Accepted Offers by Year, Technology, Voltage and Top Players in North East England

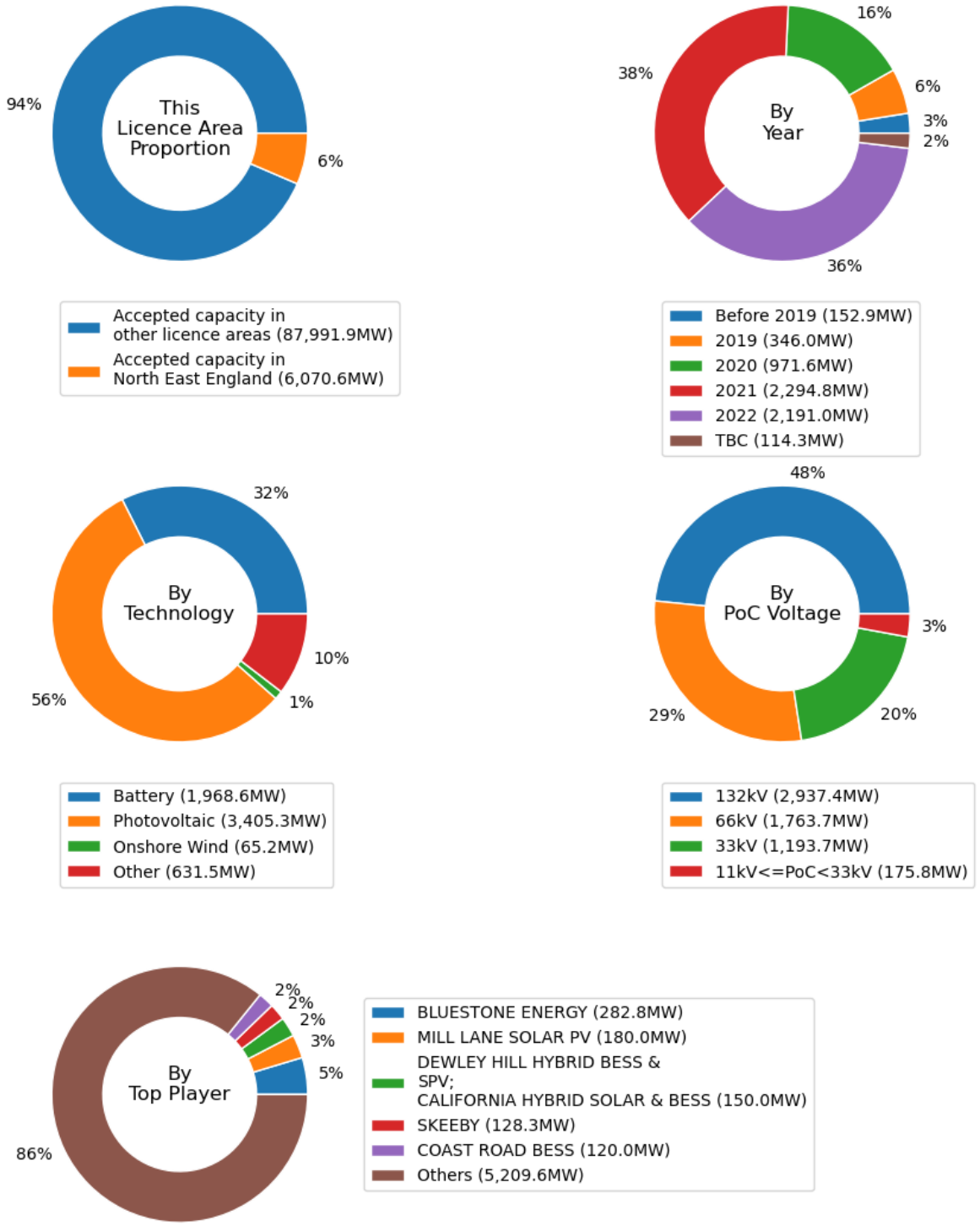


Figure 9-10: Accepted Offers by Year, Technology, Voltage and Top Players in Yorkshire

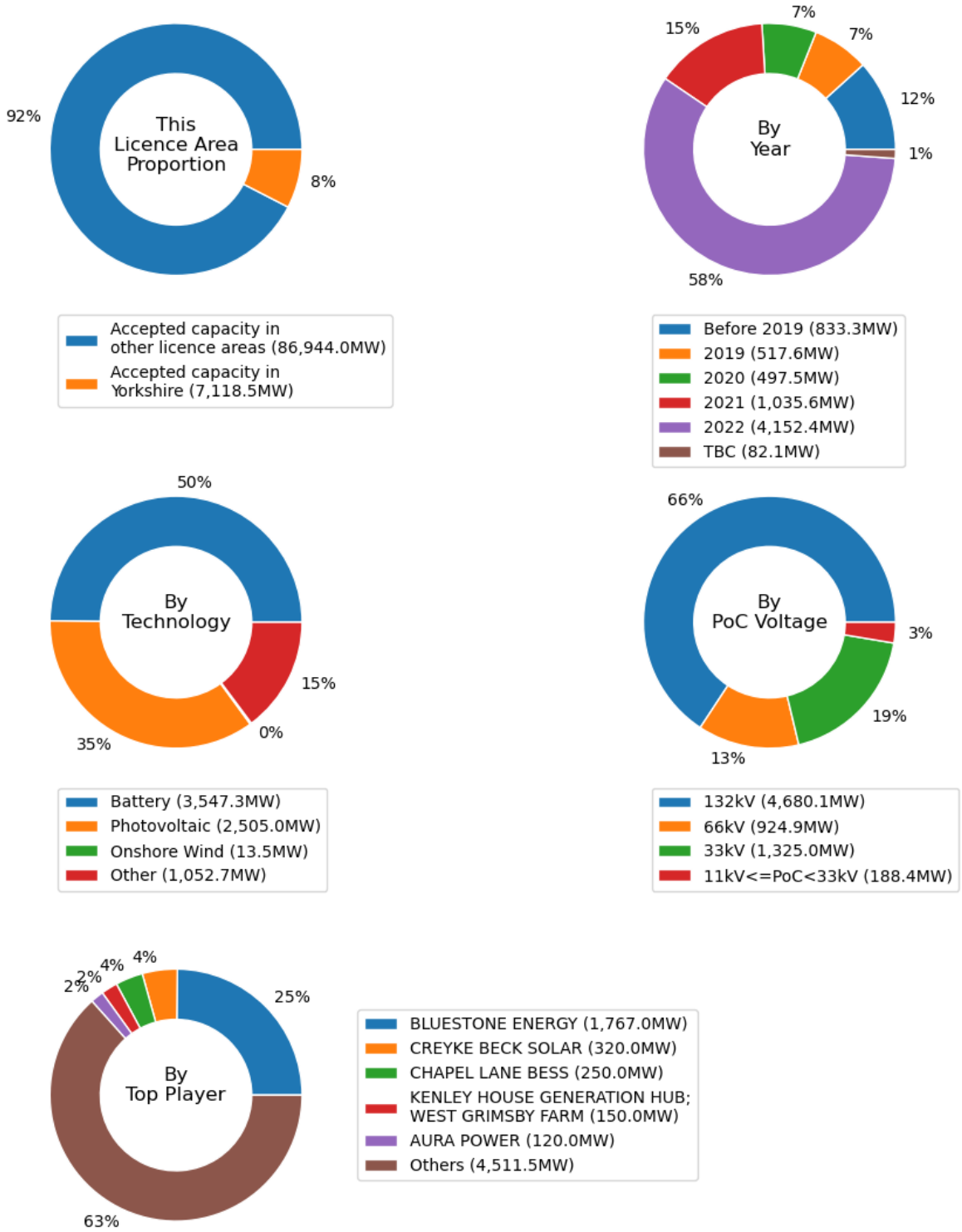


Figure 9-11: Accepted Offers by Year, Technology, Voltage and Top Players in North West England

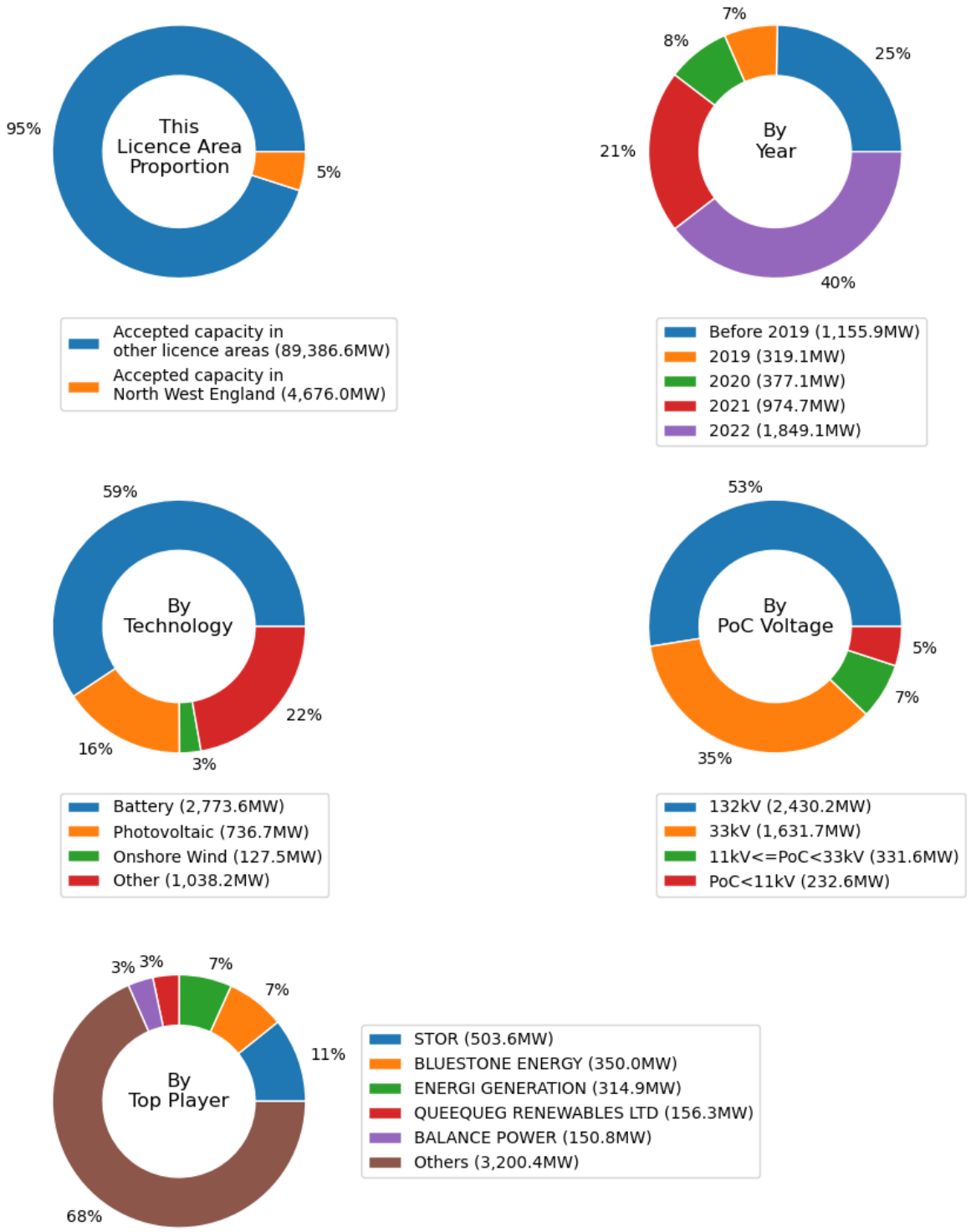


Figure 9-12: Accepted Offers by Year, Technology, Voltage and Top Players in North Wales, Merseyside and Cheshire

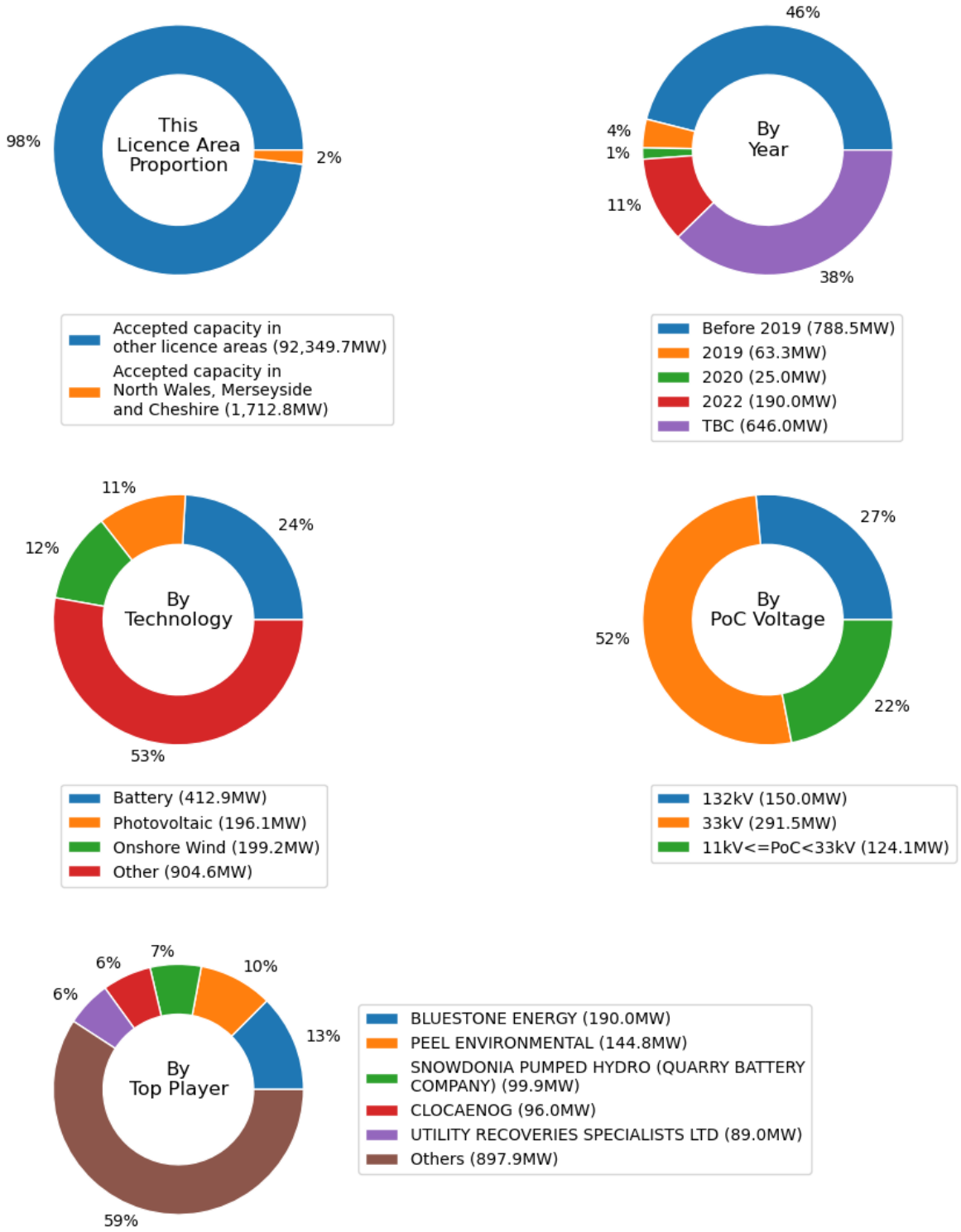
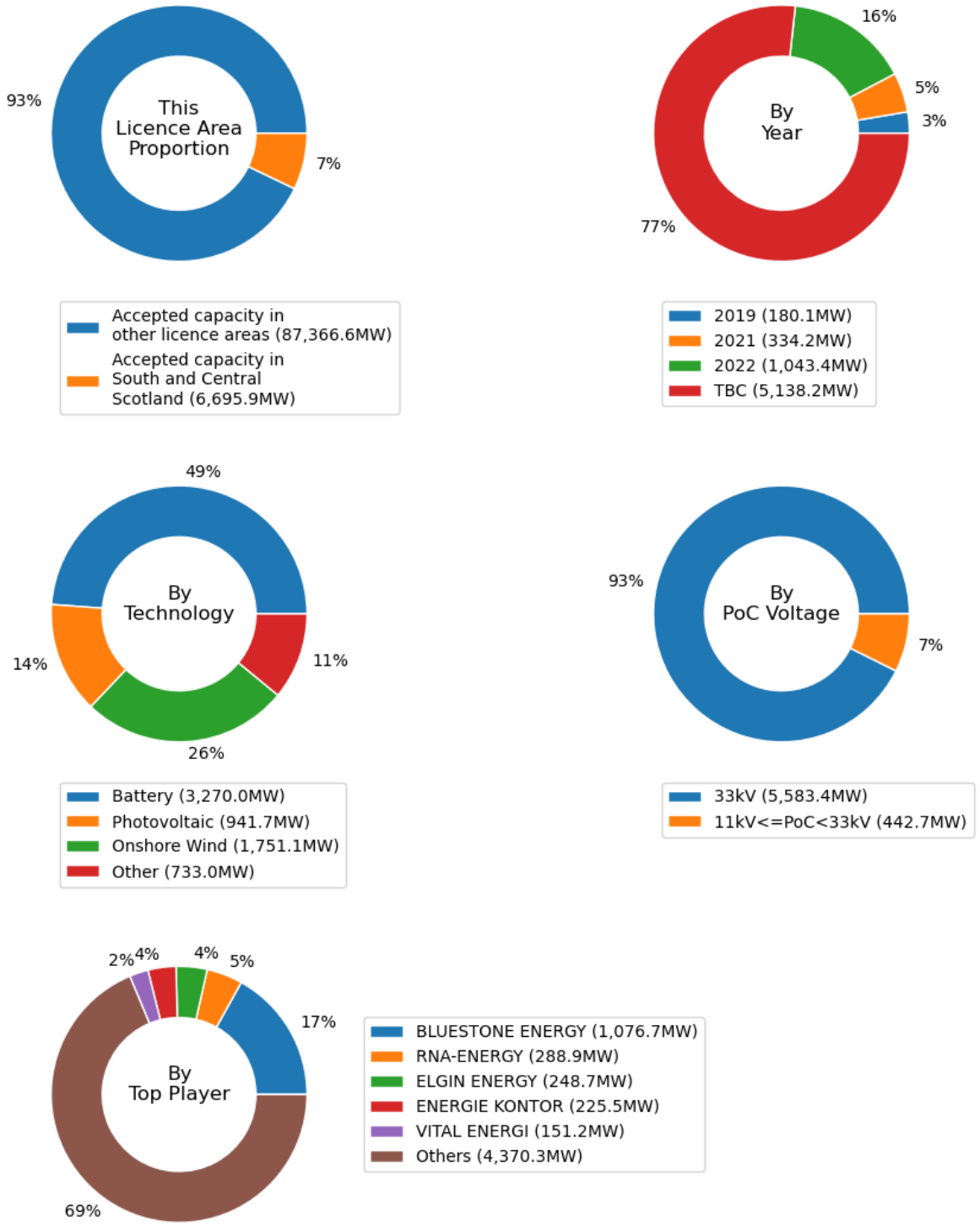


Figure 9-13: Accepted Offers by Year, Technology, Voltage and Top Players in South and Central Scotland



Appendix H: Technology by Year for Accepted Offers at Individual Licence Area Level

Figure 9-14: Technology by Year for Accepted Offers in East Midlands

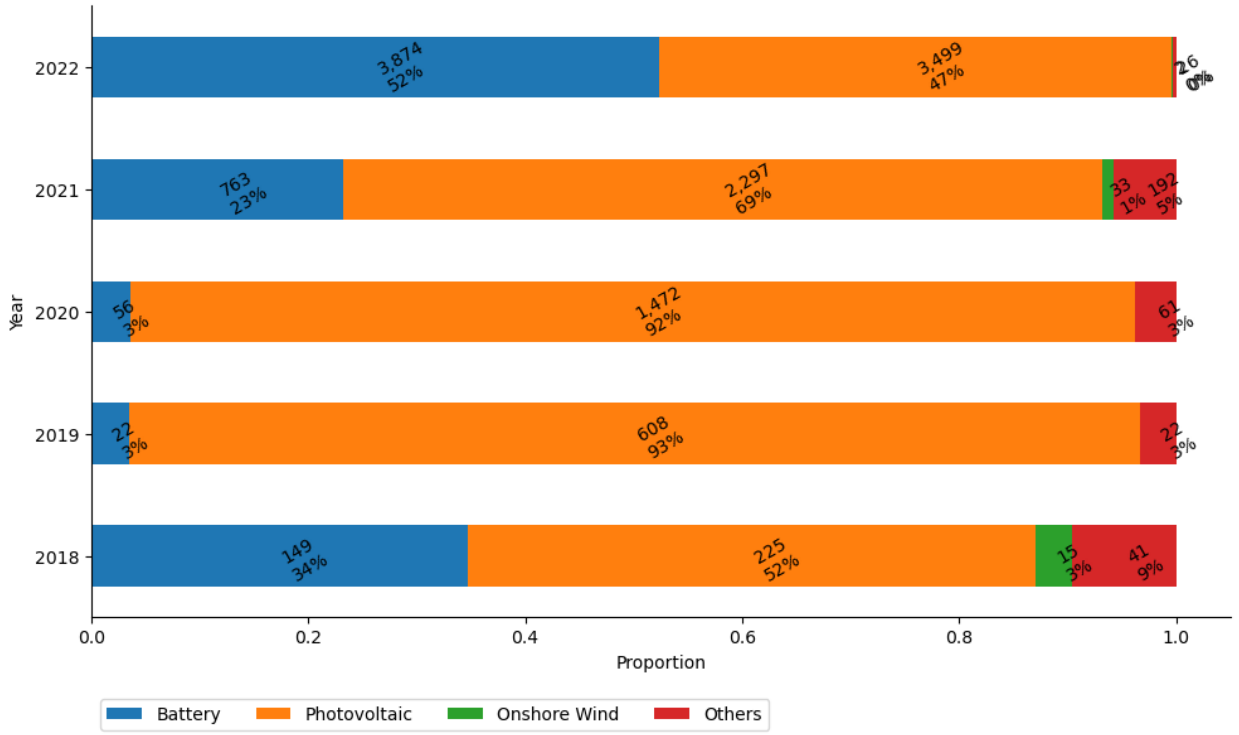


Figure 9-15: Technology by Year for Accepted Offers in South Wales

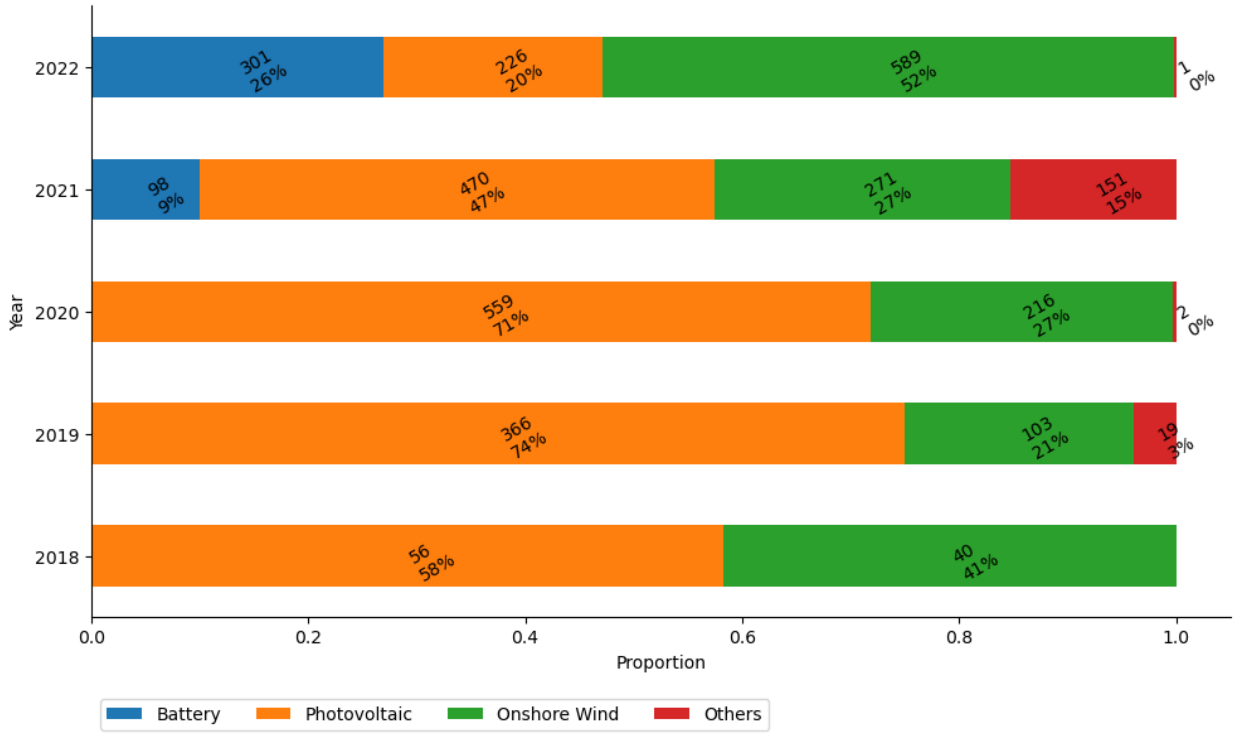


Figure 9-16: Technology by Year for Accepted Offers in South West England

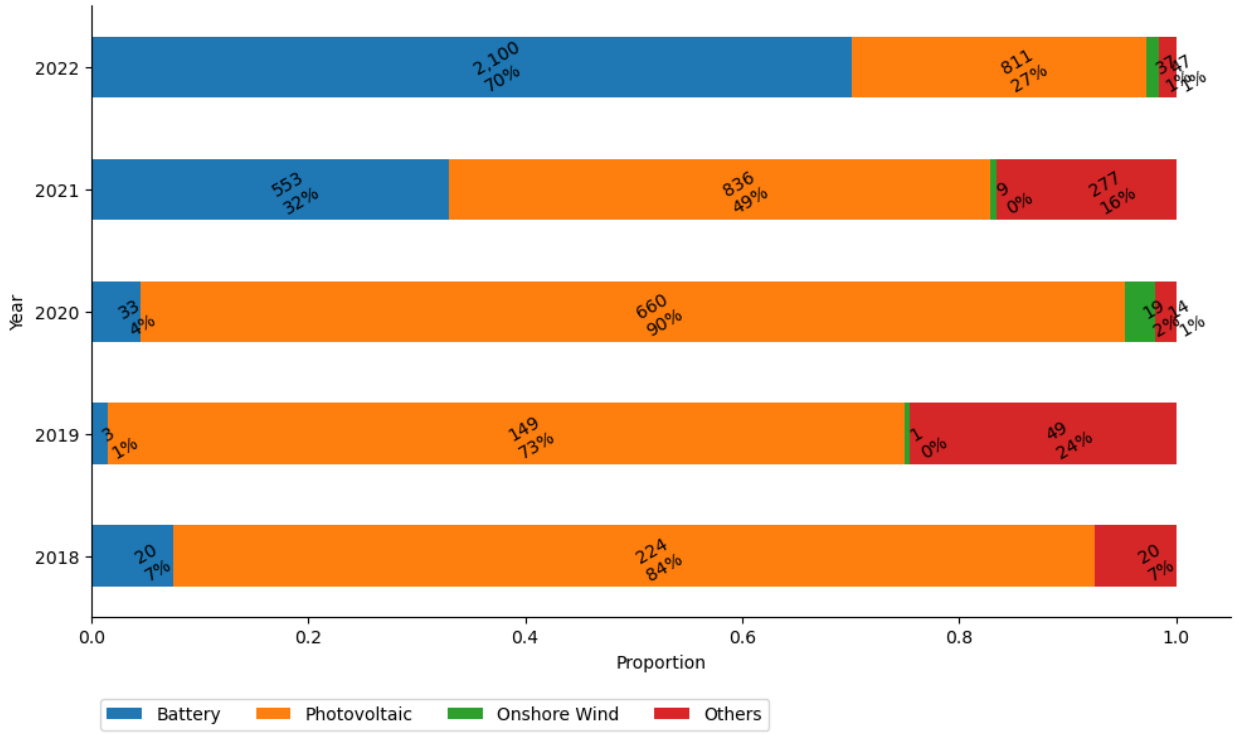


Figure 9-17: Technology by Year for Accepted Offers in West Midlands

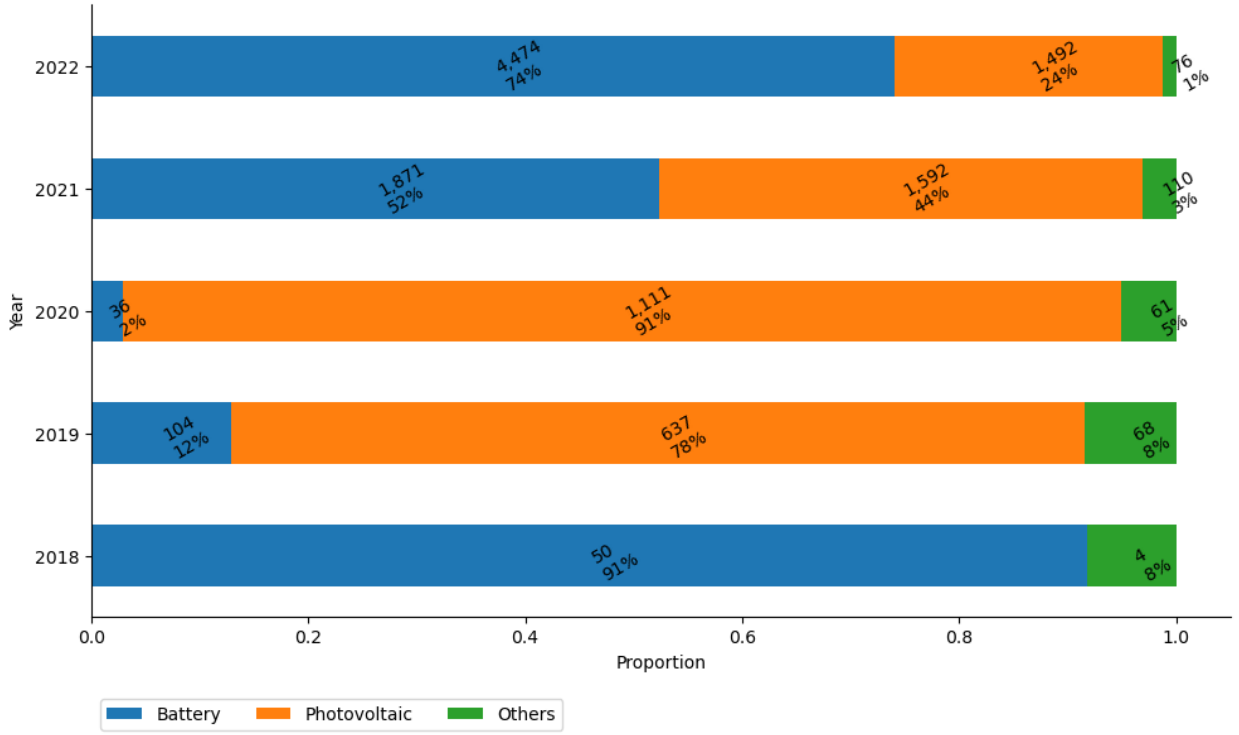


Figure 9-18: Technology by Year for Accepted Offers in North Scotland

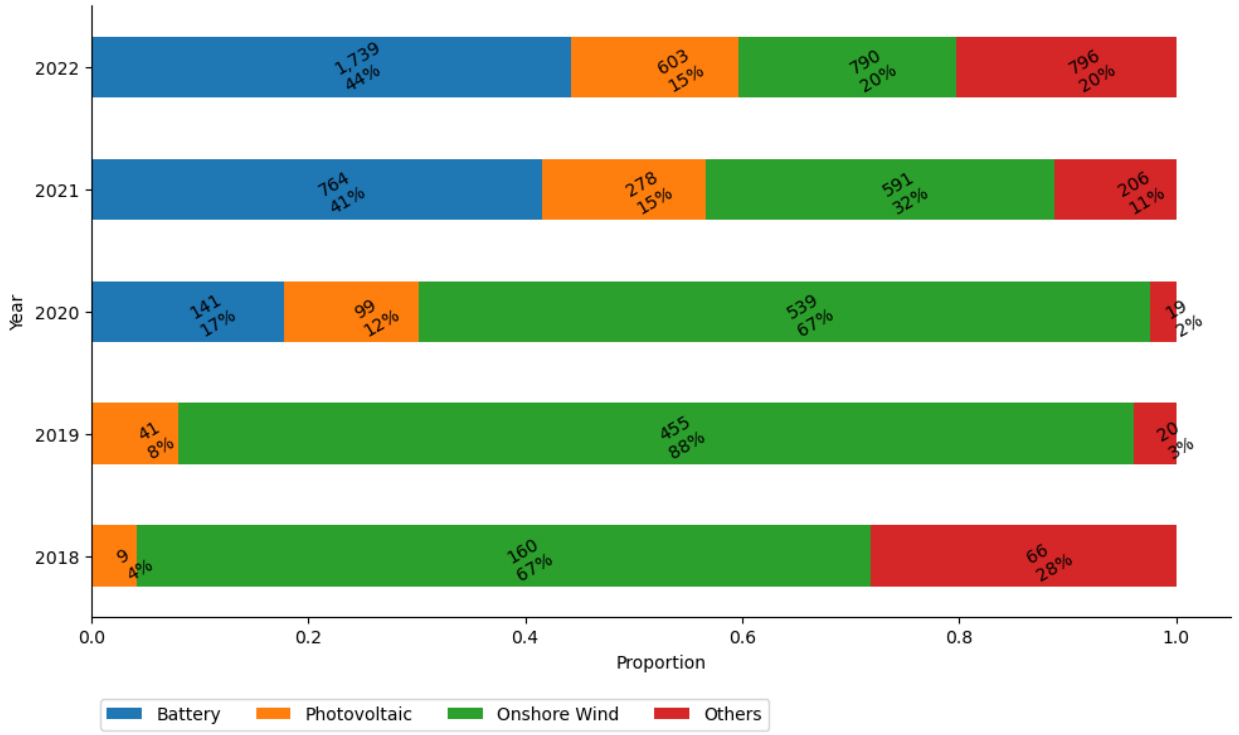


Figure 9-19: Technology by Year for Accepted Offers in Southern England

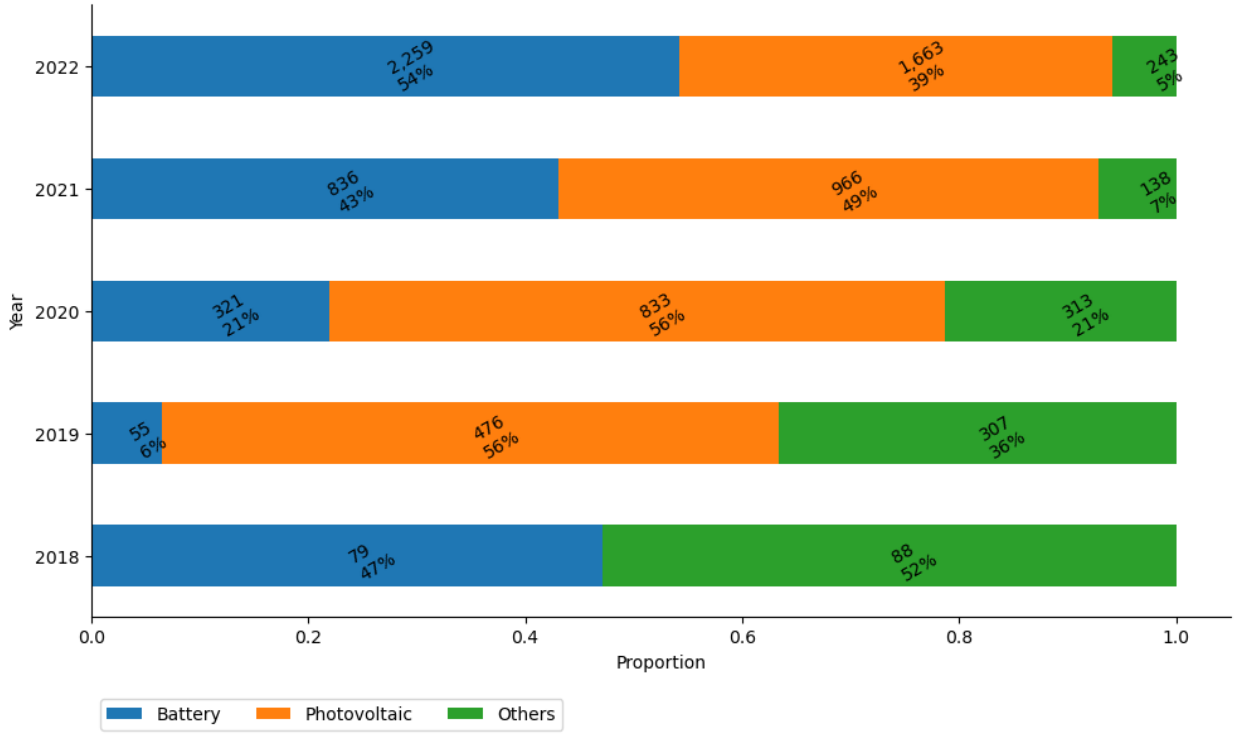


Figure 9-20: Technology by Year for Accepted Offers in East England

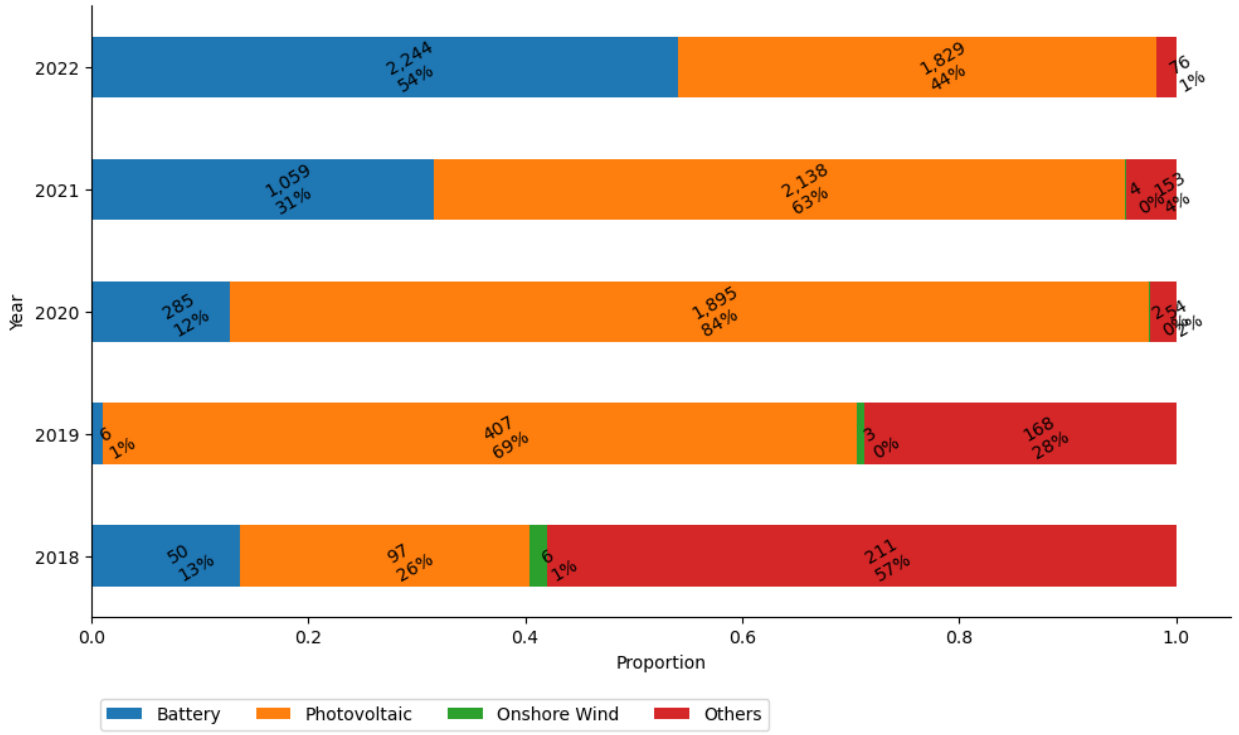


Figure 9-21: Technology by Year for Accepted Offers in South East England

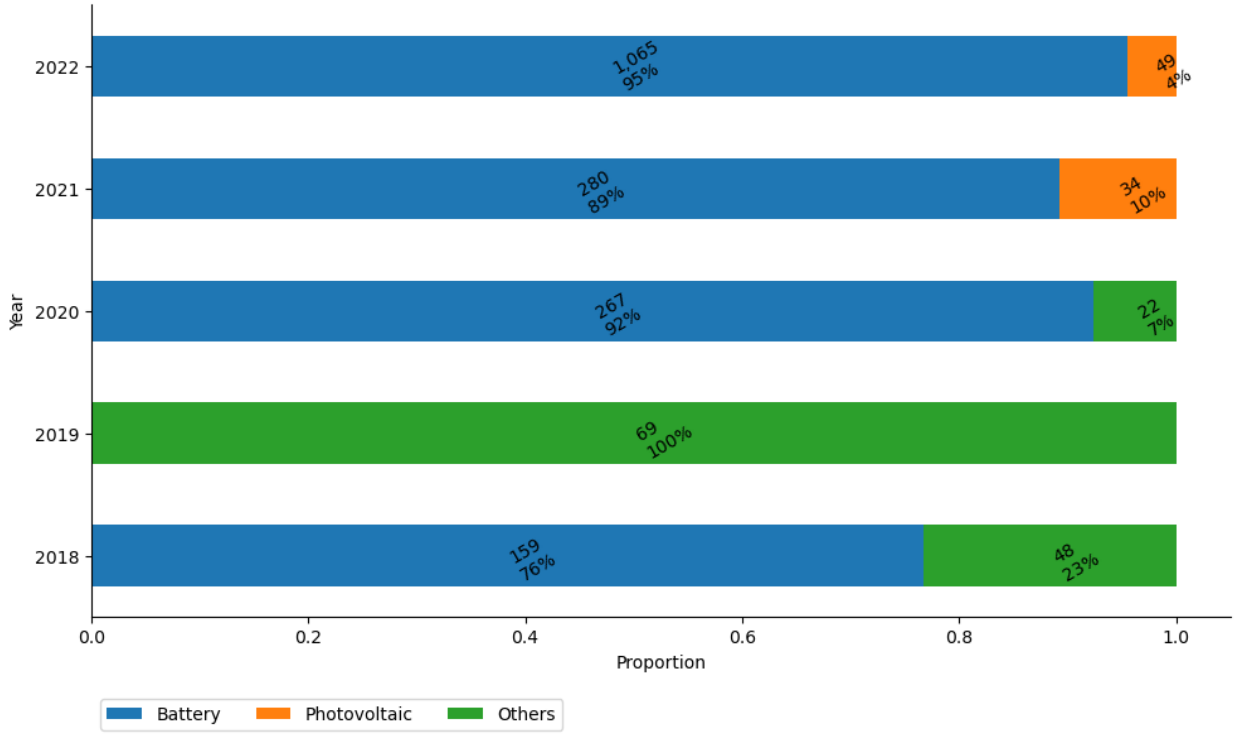


Figure 9-22: Technology by Year for Accepted Offers in North East England

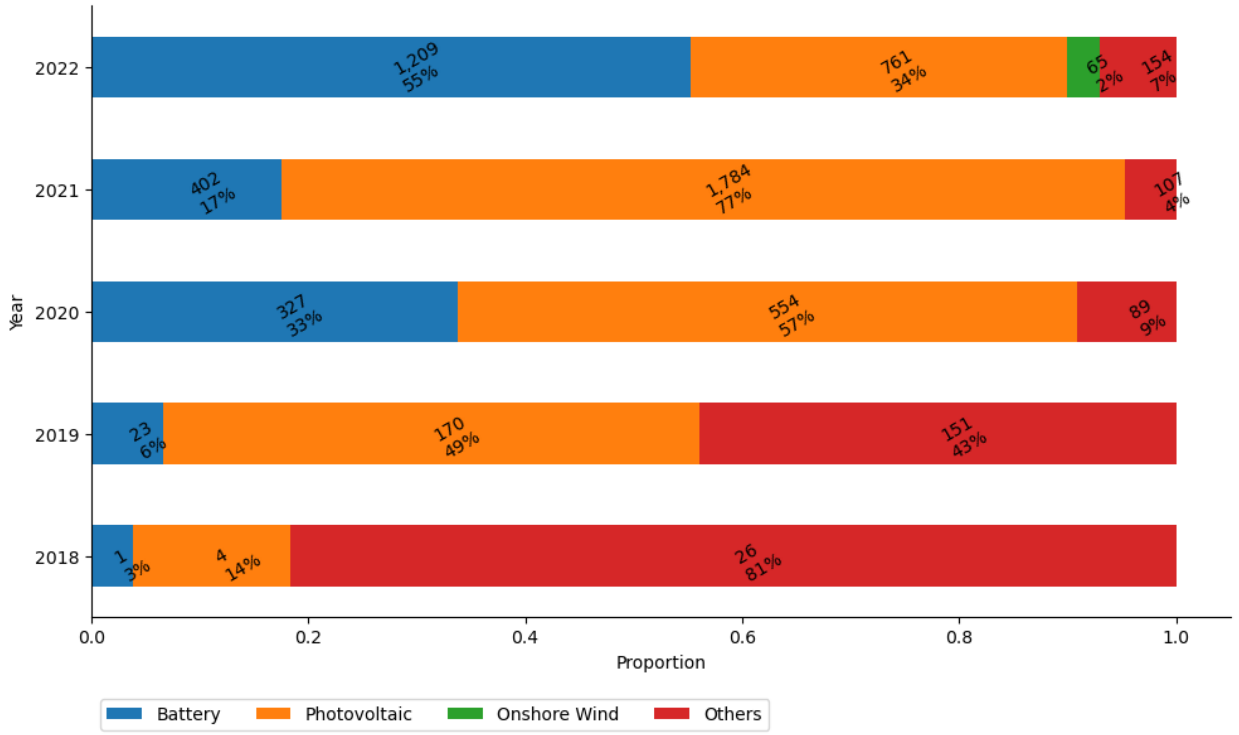


Figure 9-23: Technology by Year for Accepted Offers in Yorkshire

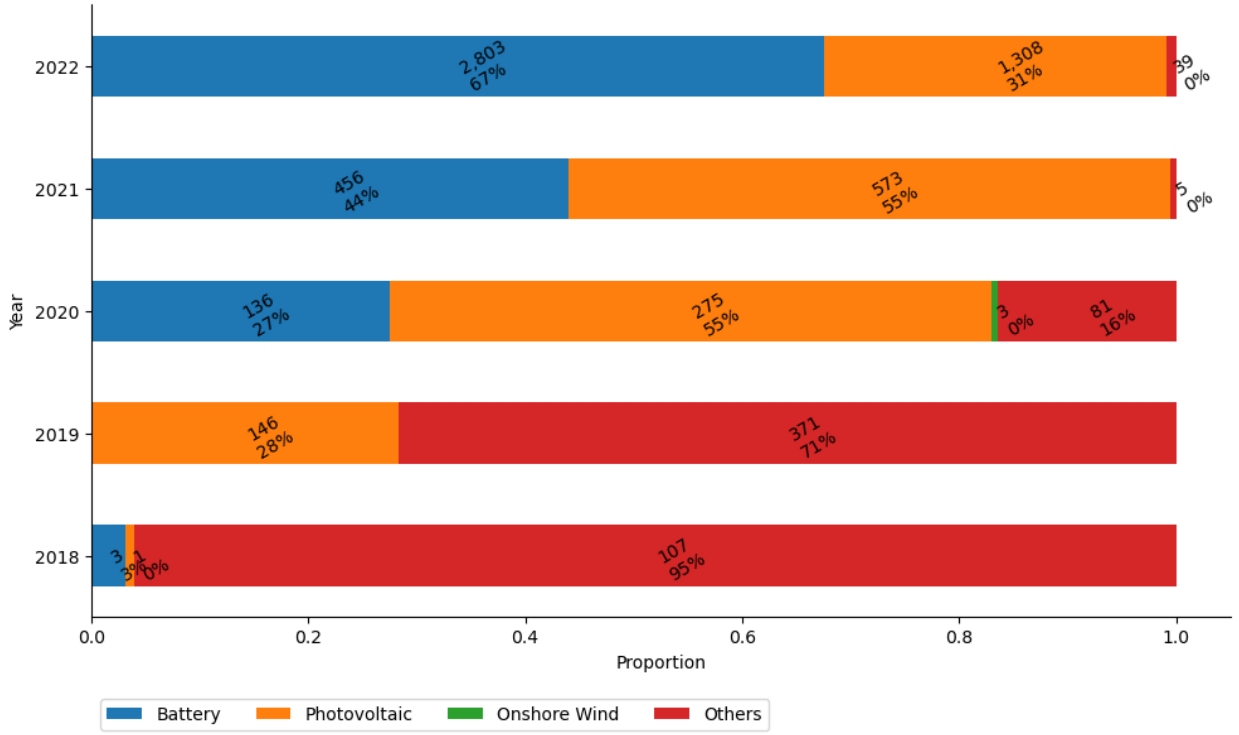
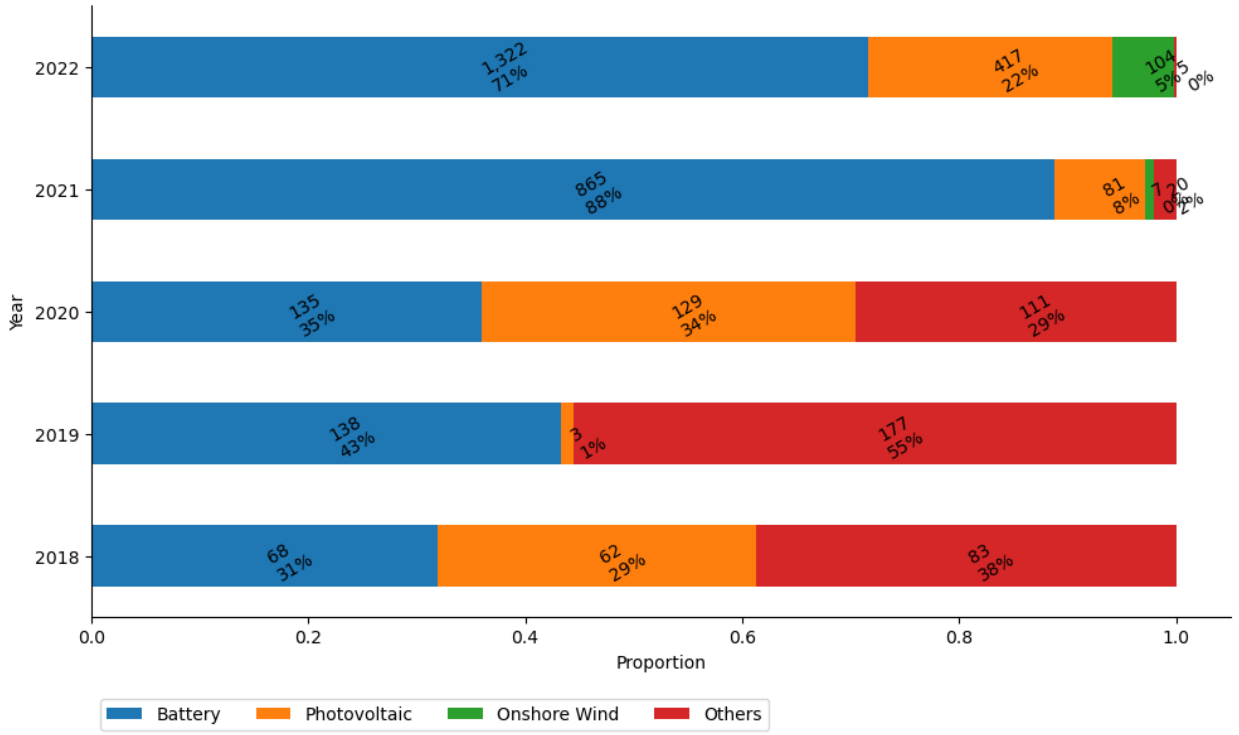


Figure 9-24: Technology by Year for Accepted Offers in North West England



Appendix I: PoC Voltage by Technology for Accepted Offers at Individual Licence Area Level

Figure 9-25: PoC Voltage by Technology for Accepted Offers in East Midlands

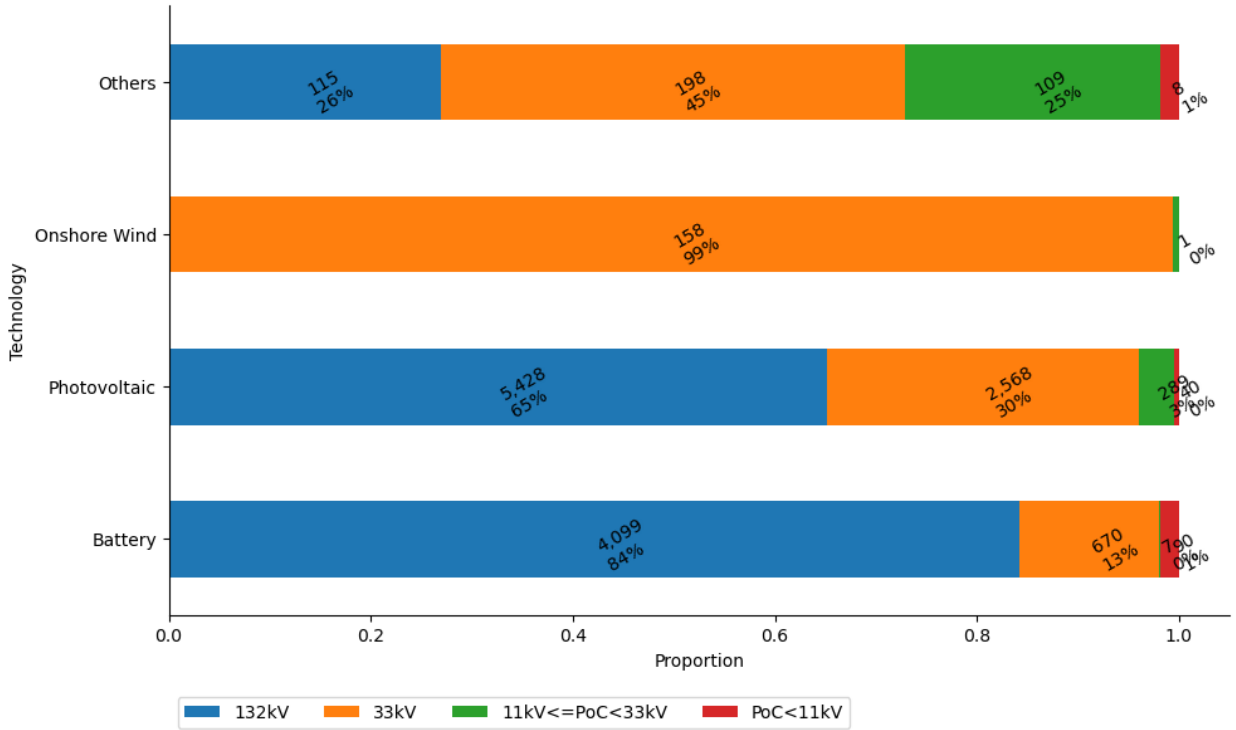


Figure 9-26: PoC Voltage by Technology for Accepted Offers in South Wales

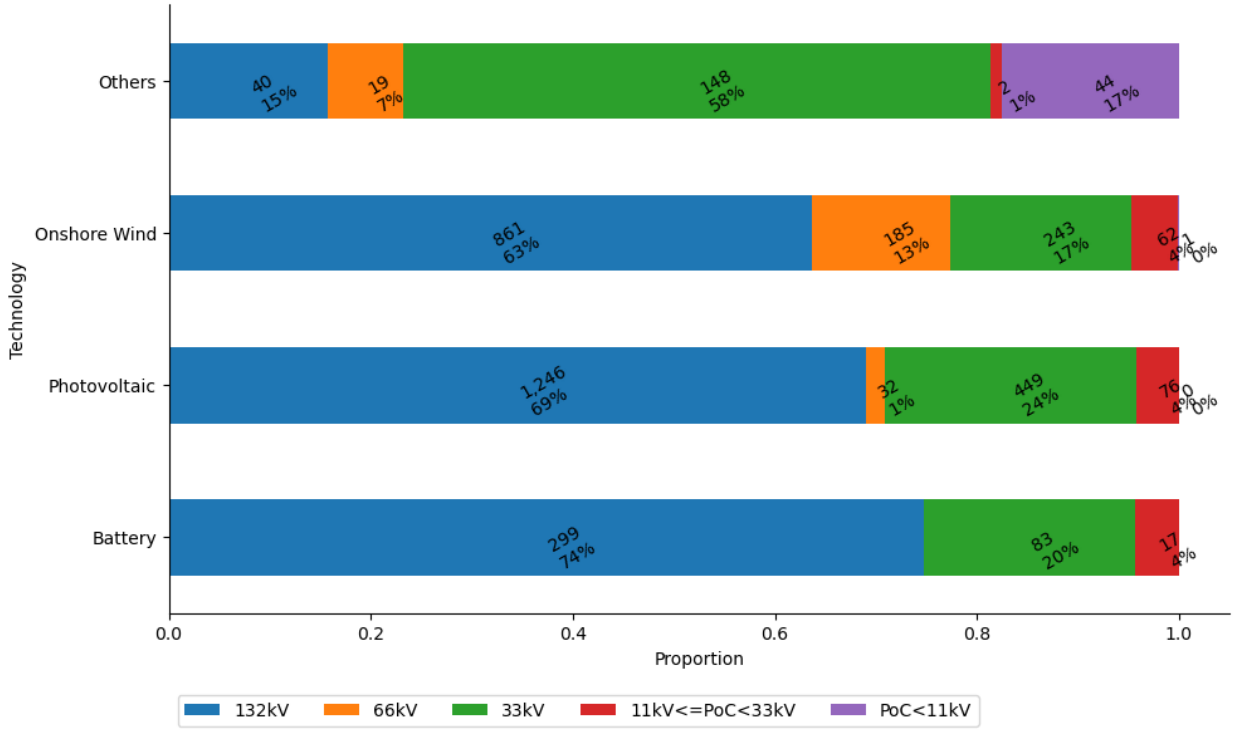


Figure 9-27: PoC Voltage by Technology for Accepted Offers in South West England

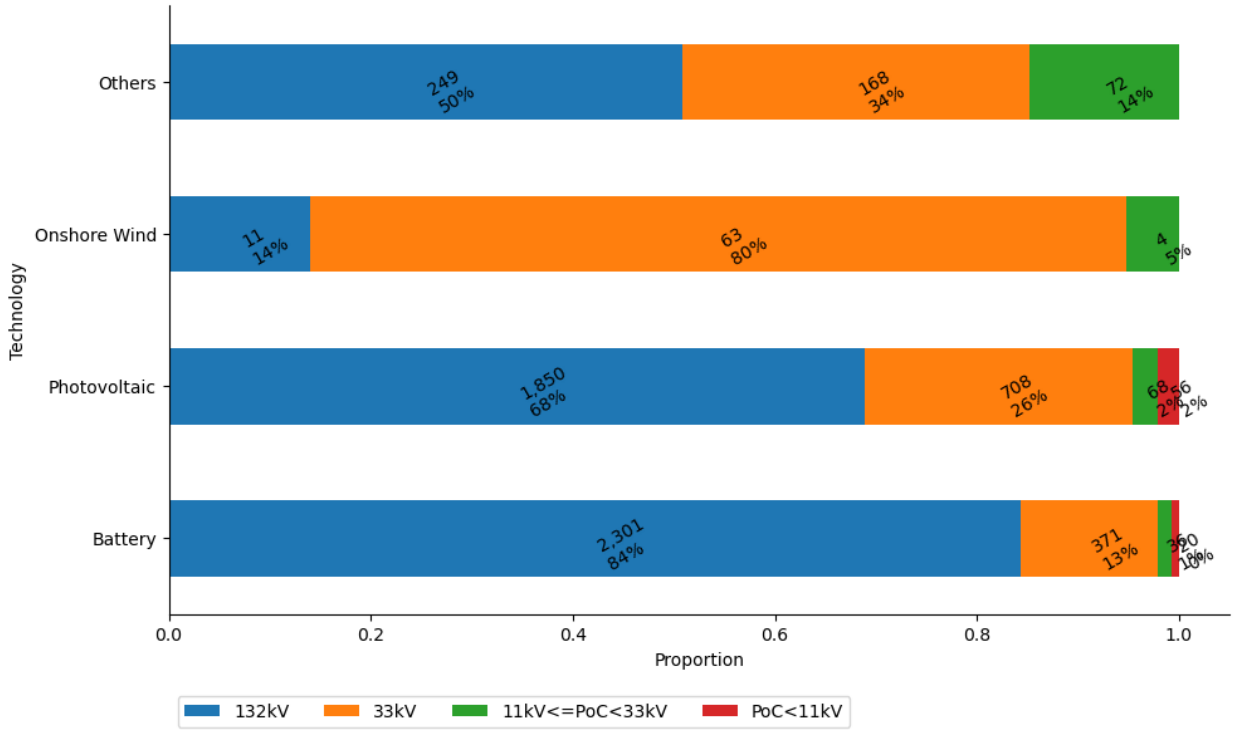


Figure 9-28: PoC Voltage by Technology for Accepted Offers in West Midlands

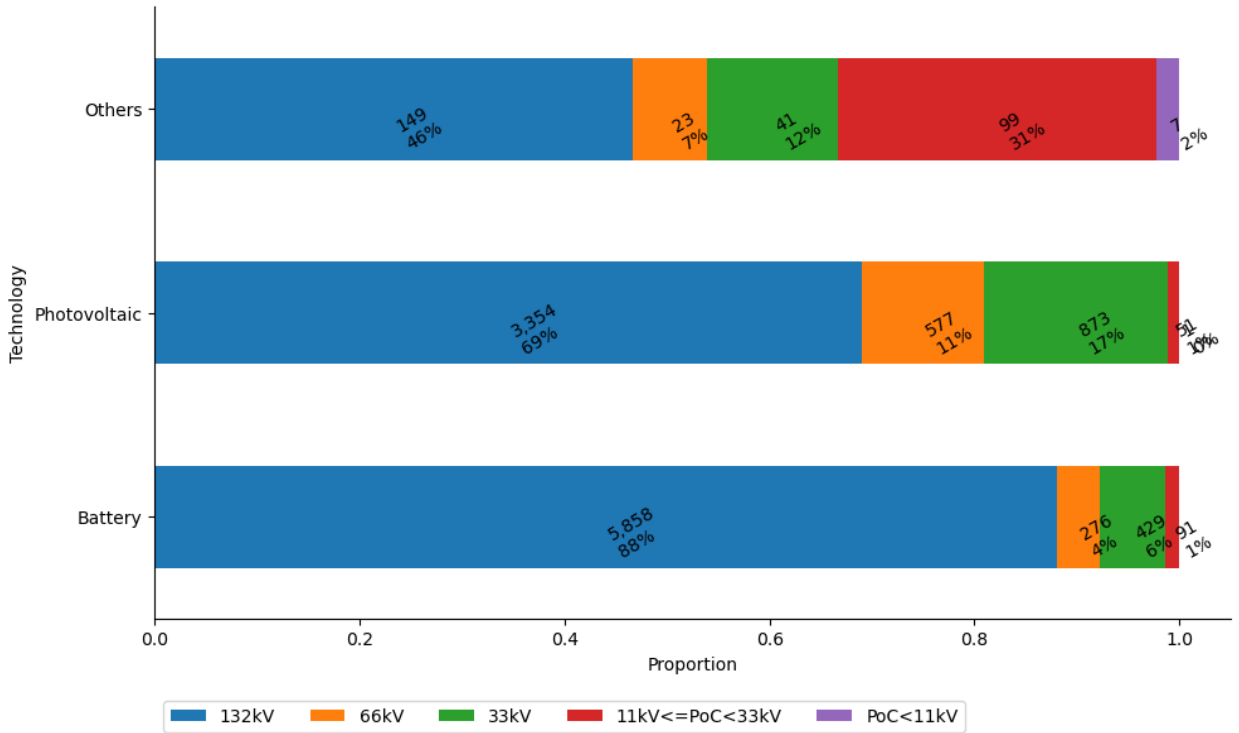


Figure 9-29: PoC Voltage by Technology for Accepted Offers in North Scotland

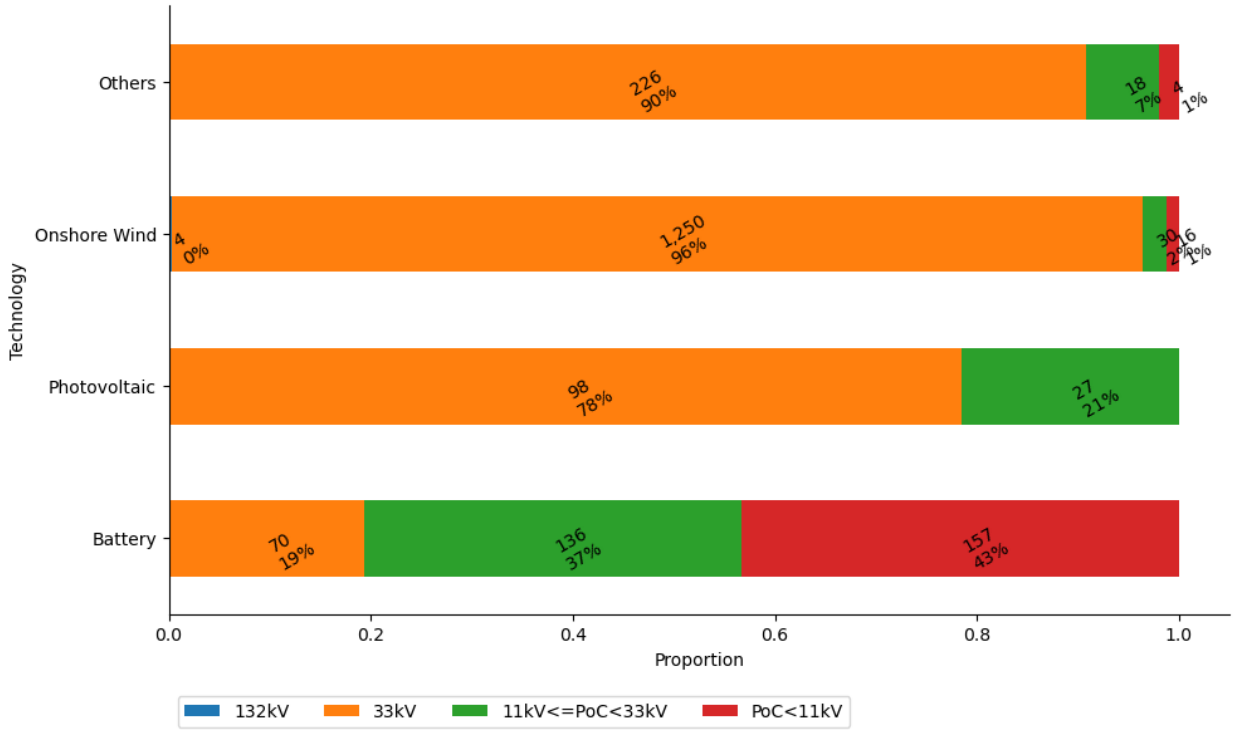


Figure 9-30: PoC Voltage by Technology for Accepted Offers in Southern England

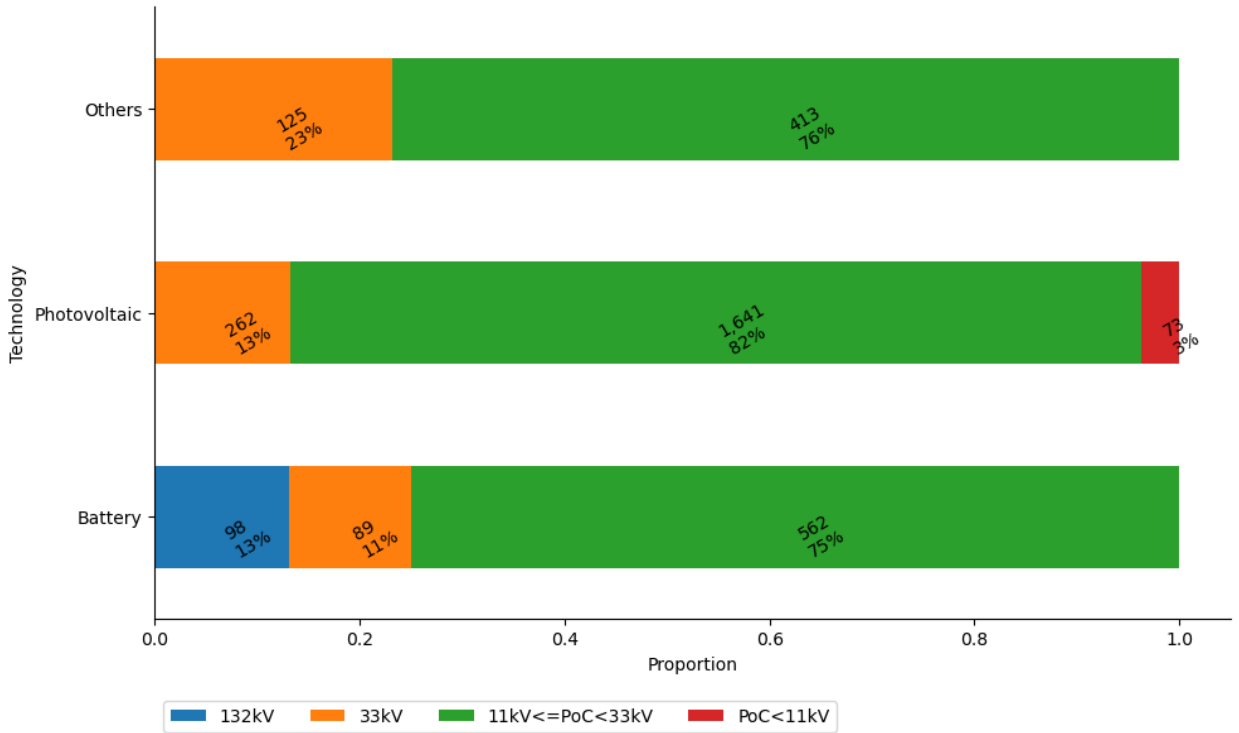


Figure 9-31: PoC Voltage by Technology for Accepted Offers in East England

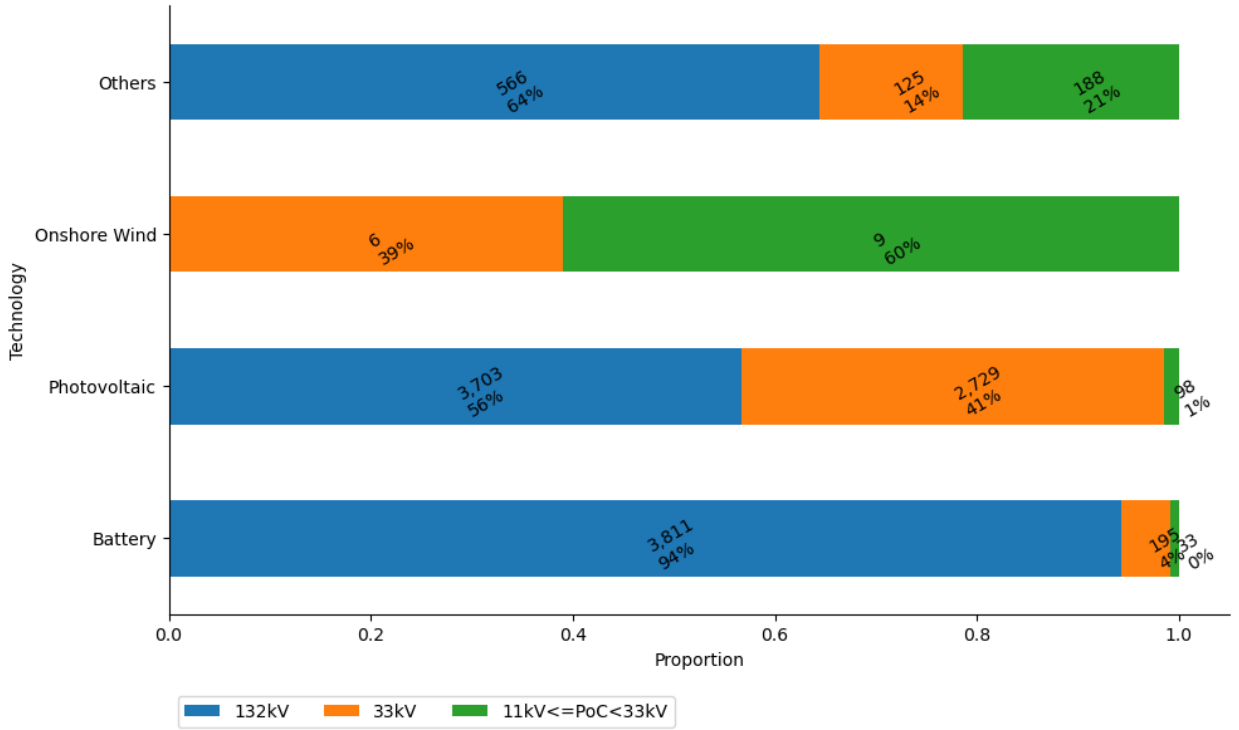


Figure 9-32: PoC Voltage by Technology for Accepted Offers in South East England

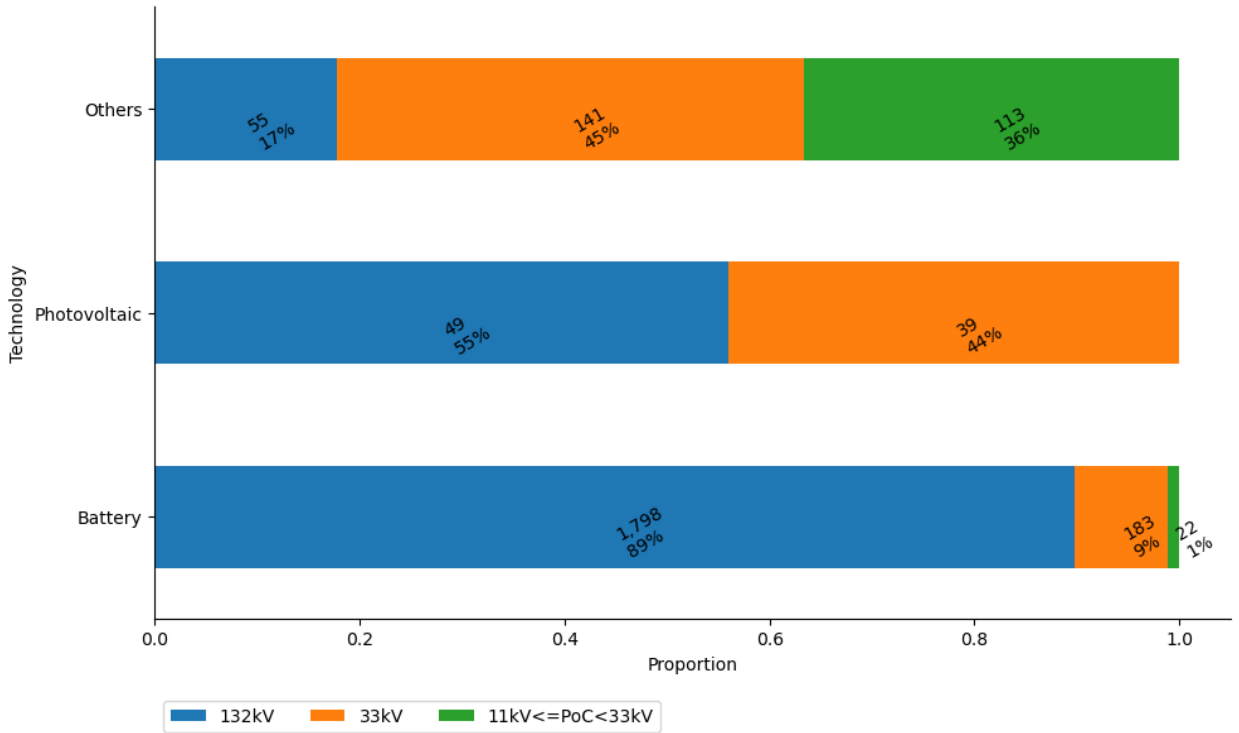


Figure 9-33: PoC Voltage by Technology for Accepted Offers in North East England

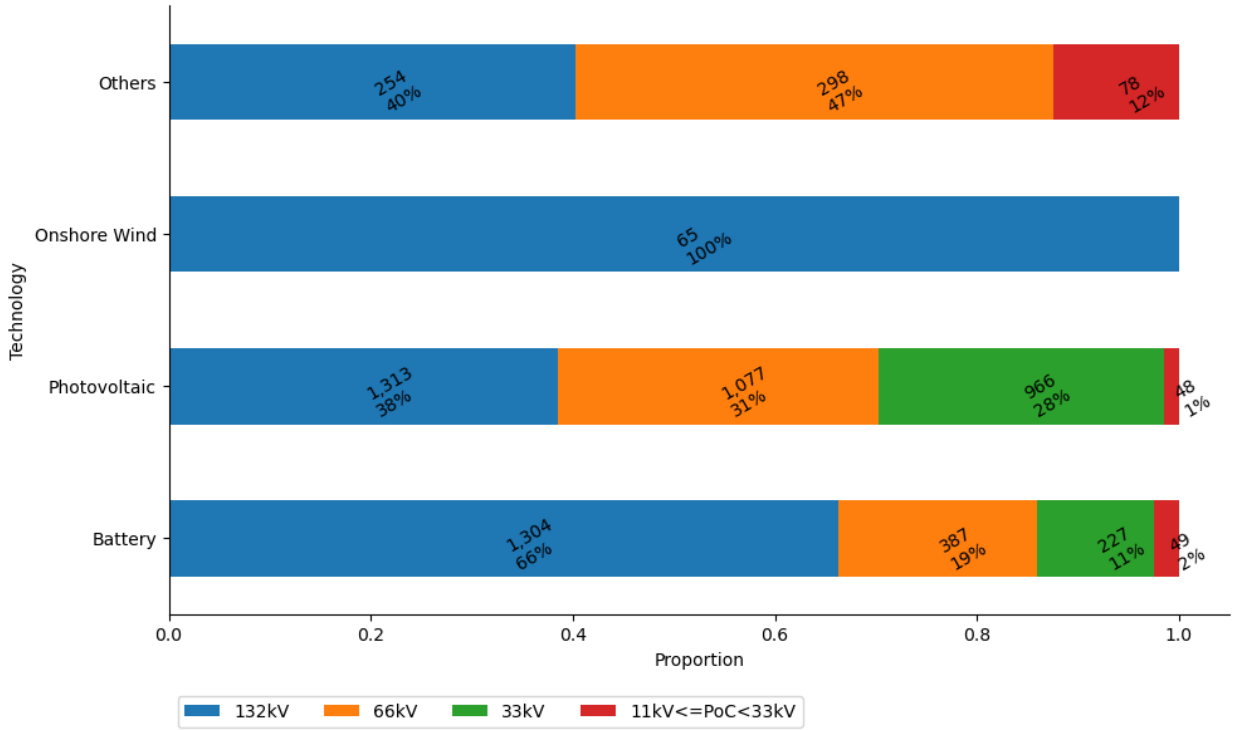


Figure 9-34: PoC Voltage by Technology for Accepted Offers in Yorkshire

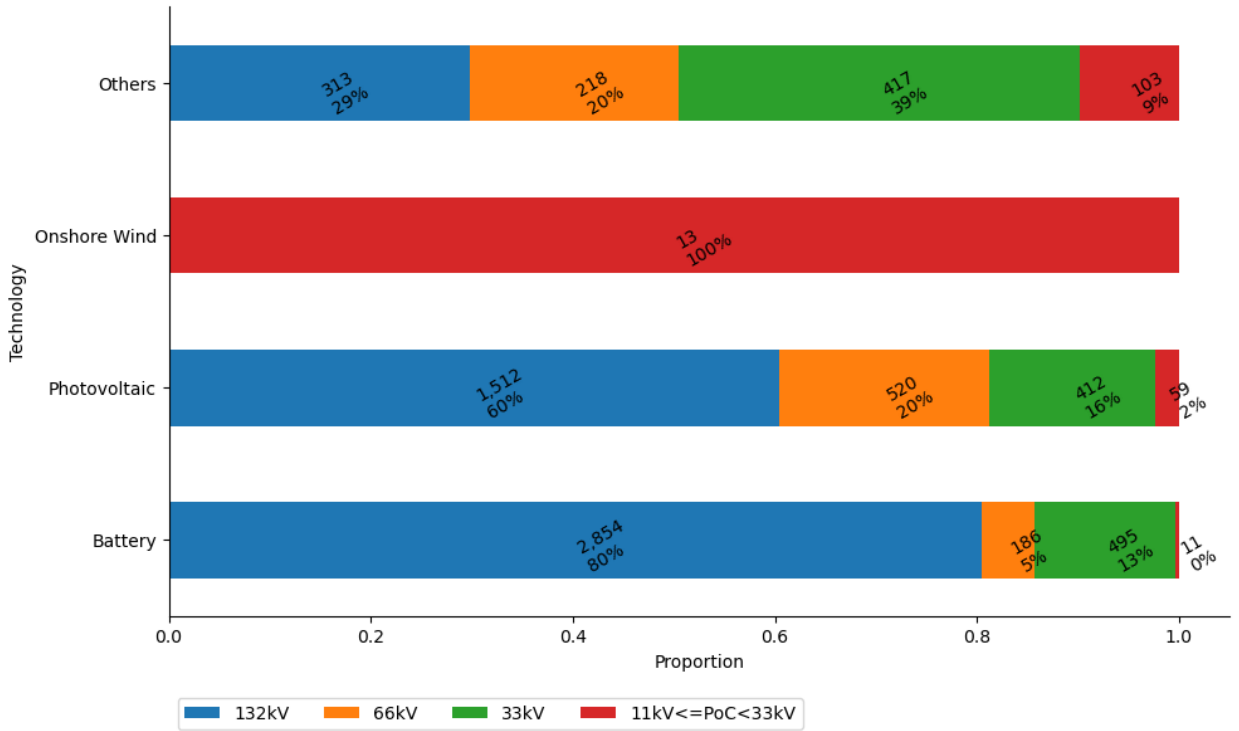


Figure 9-35: PoC Voltage by Technology for Accepted Offers in North Wales, Merseyside and Cheshire

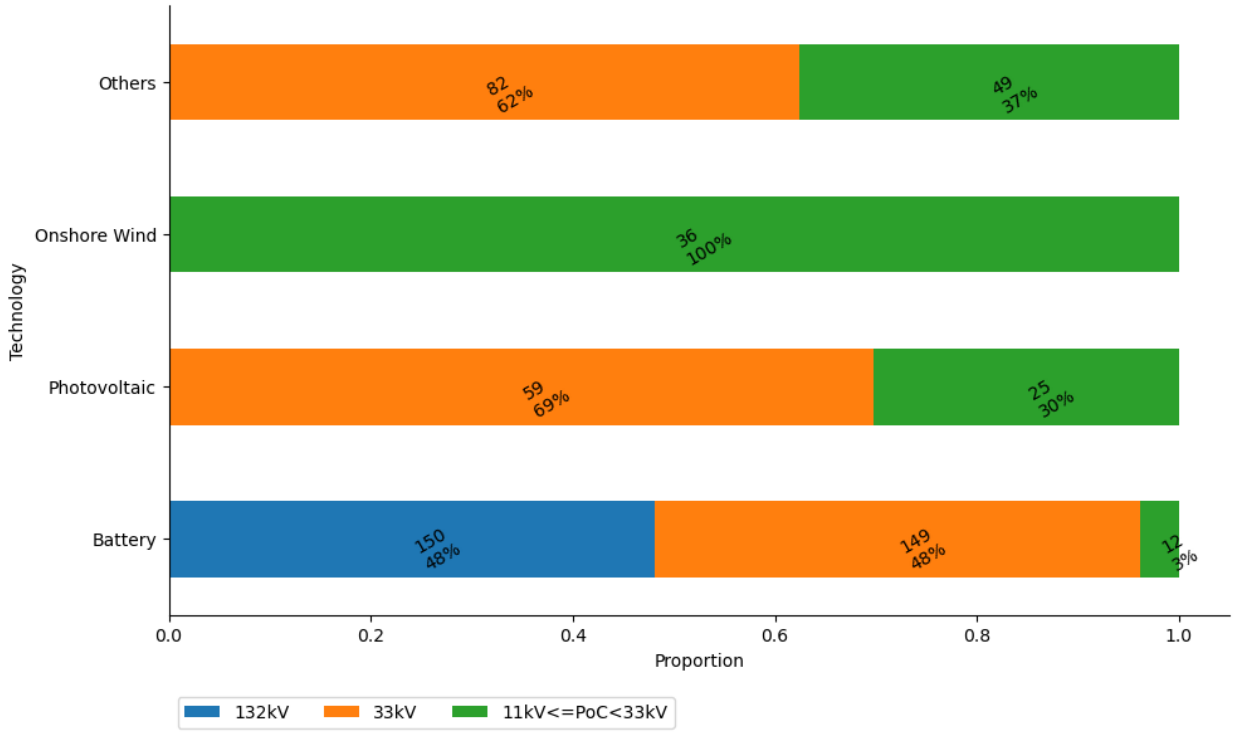


Figure 9-36: PoC Voltage by Technology for Accepted Offers in South and Central Scotland

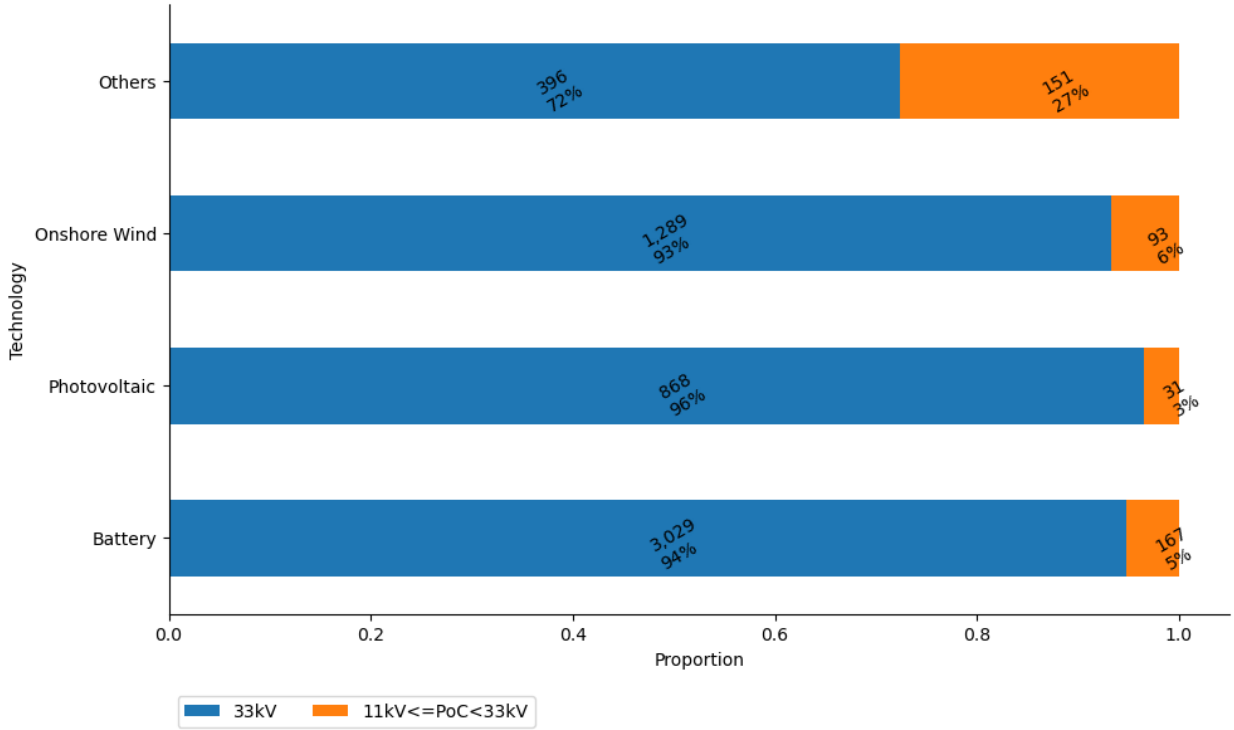
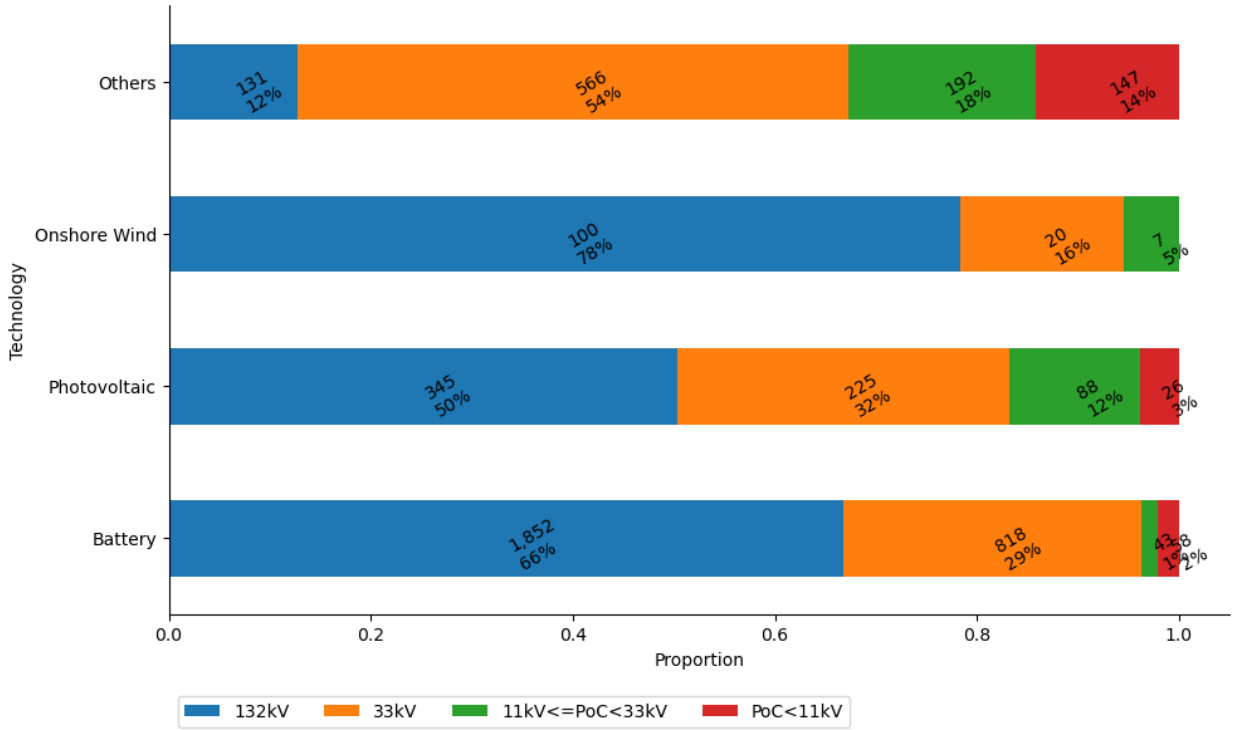


Figure 9-37: PoC Voltage by Technology for Accepted Offers in North West England



Appendix J: PoC Voltage by Year for Accepted Offers at Individual Licence Area Level

Figure 9-38: PoC Voltage by Year for Accepted Offers in East Midlands

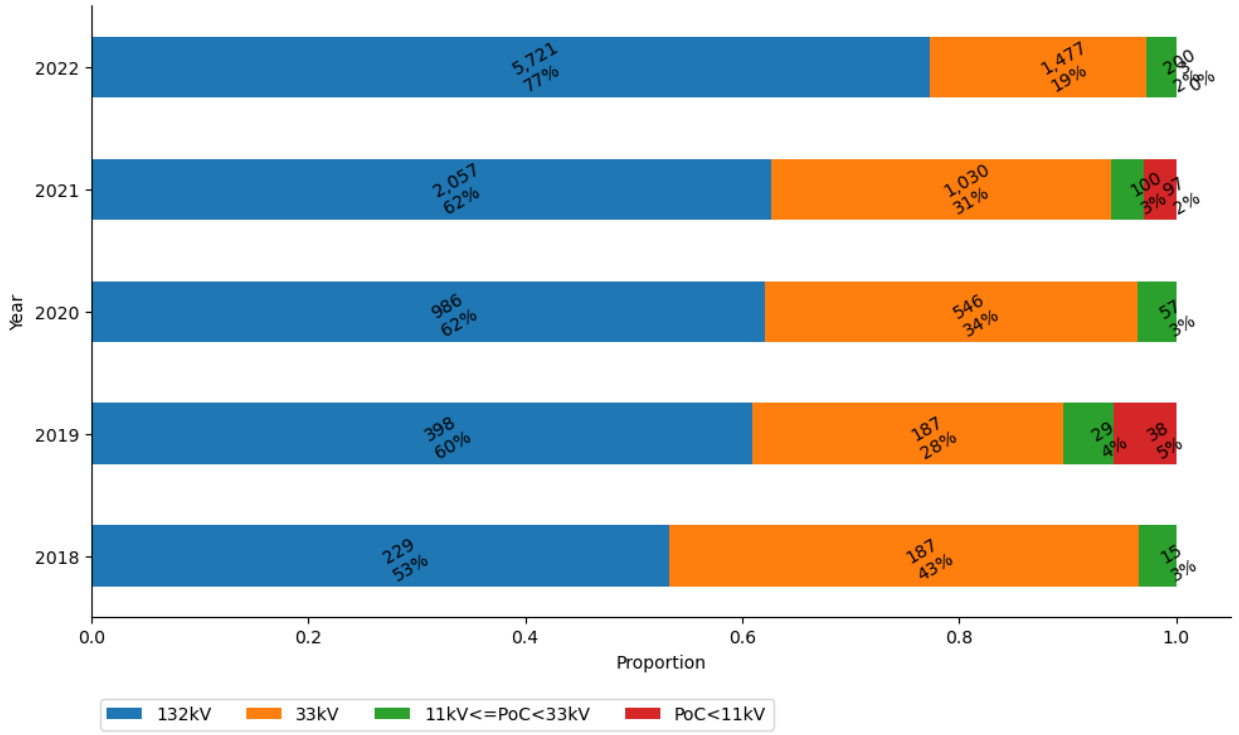


Figure 9-39: PoC Voltage by Year for Accepted Offers in South Wales

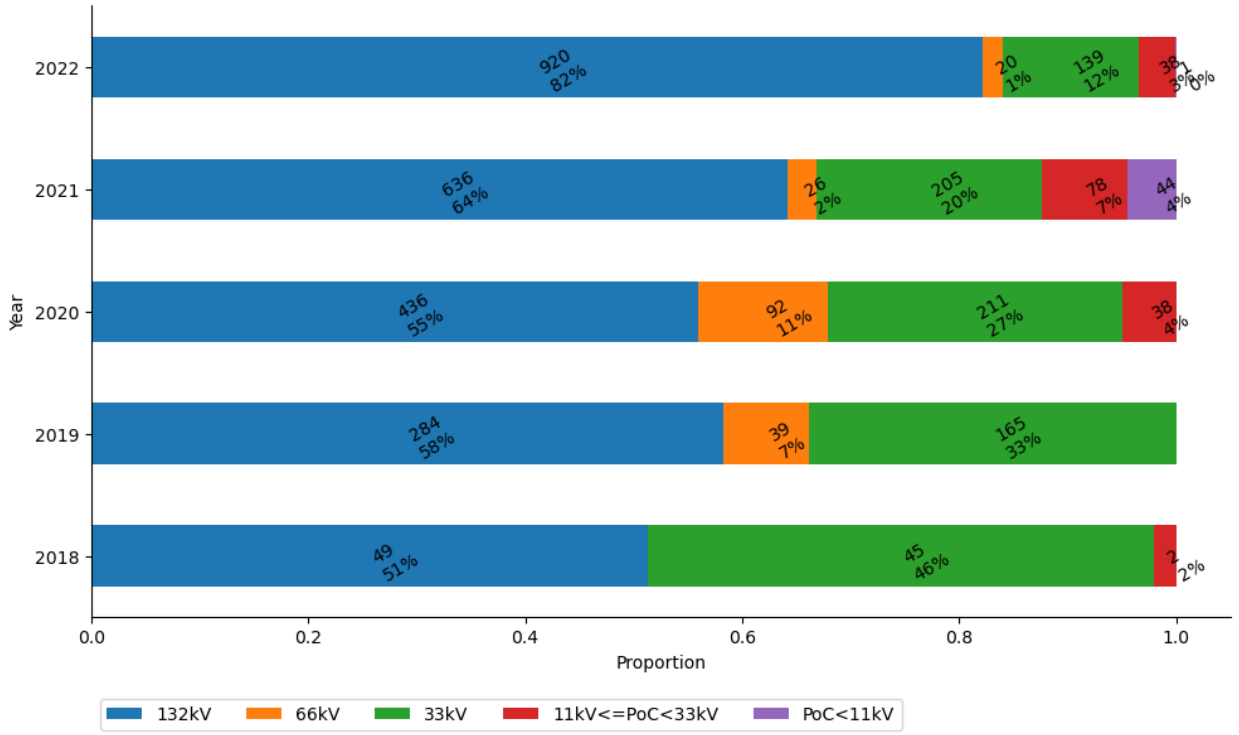


Figure 9-40: PoC Voltage by Year for Accepted Offers in South West England

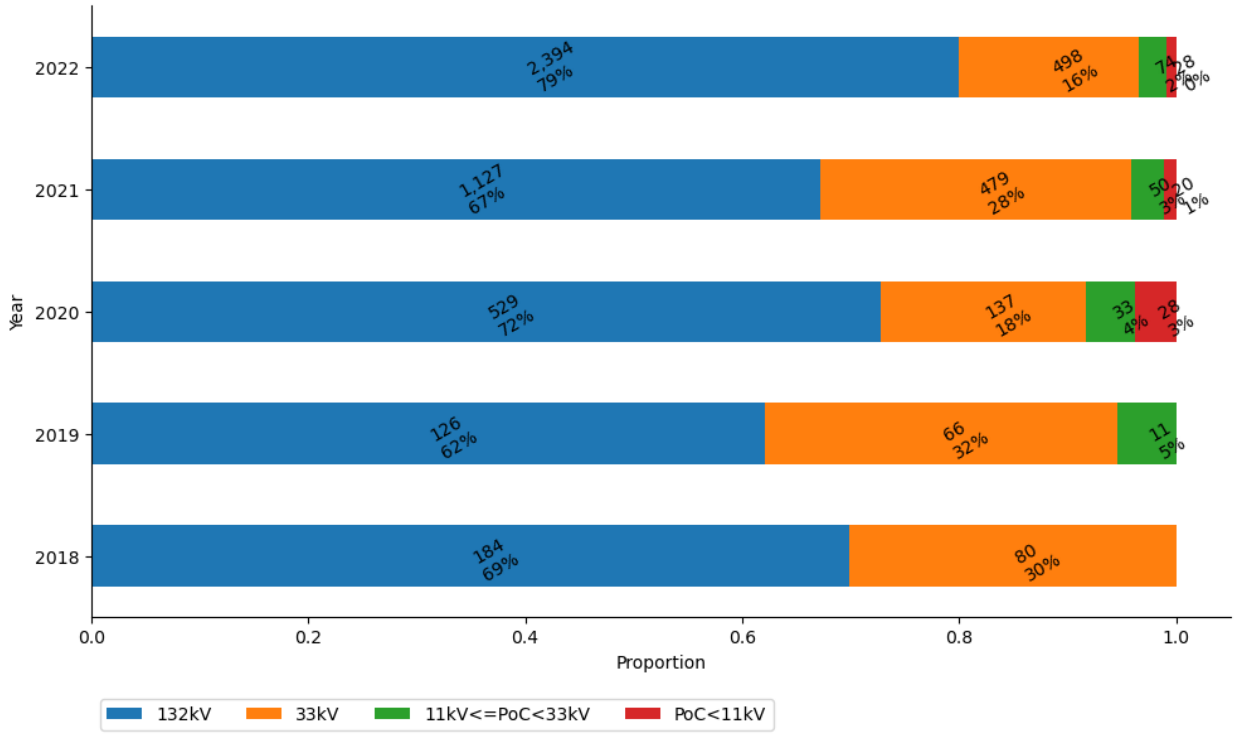


Figure 9-41: PoC Voltage by Year for Accepted Offers in West Midlands

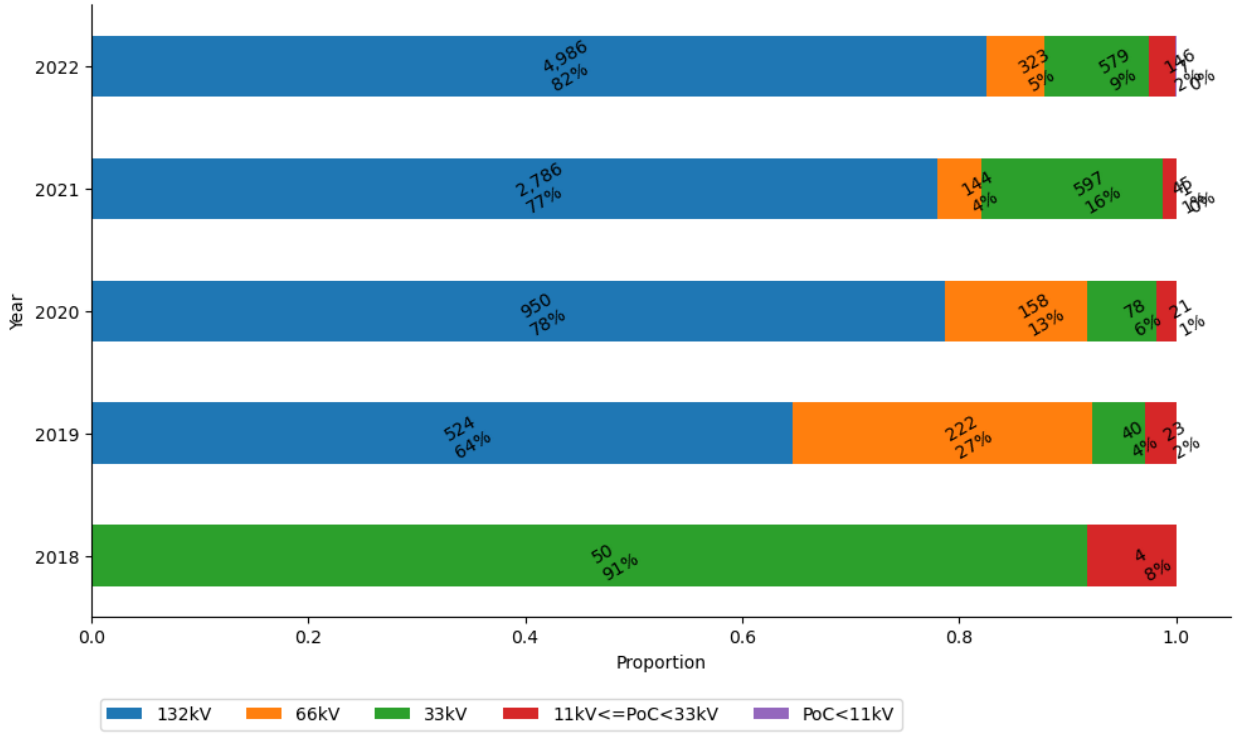


Figure 9-42: PoC Voltage by Year for Accepted Offers in North Scotland

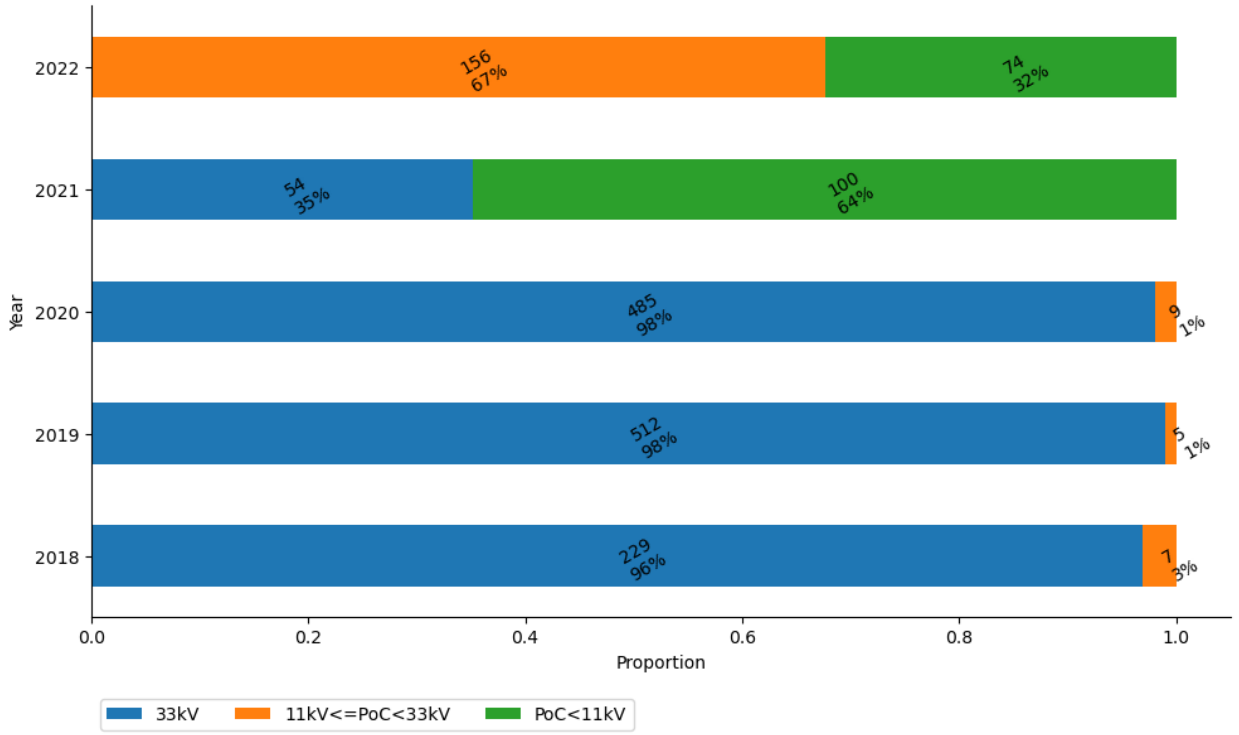


Figure 9-43: PoC Voltage by Year for Accepted Offers in Southern England

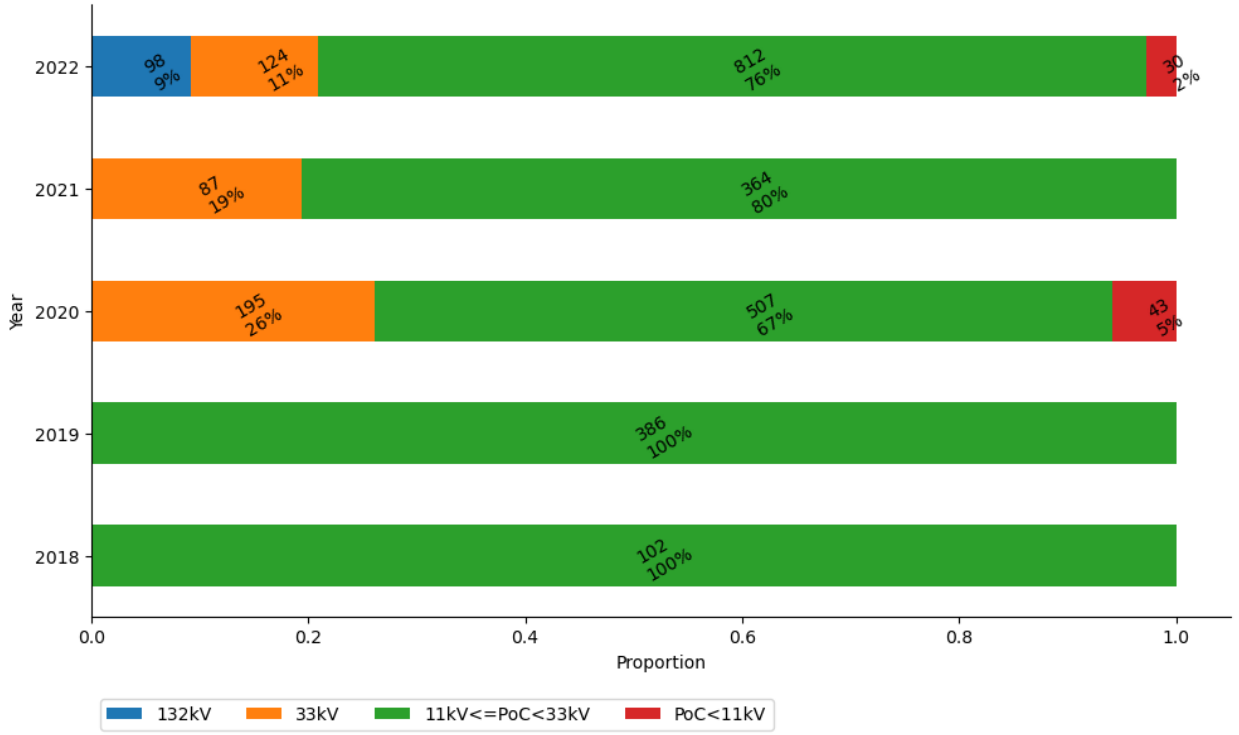


Figure 9-44: PoC Voltage by Year for Accepted Offers in East England

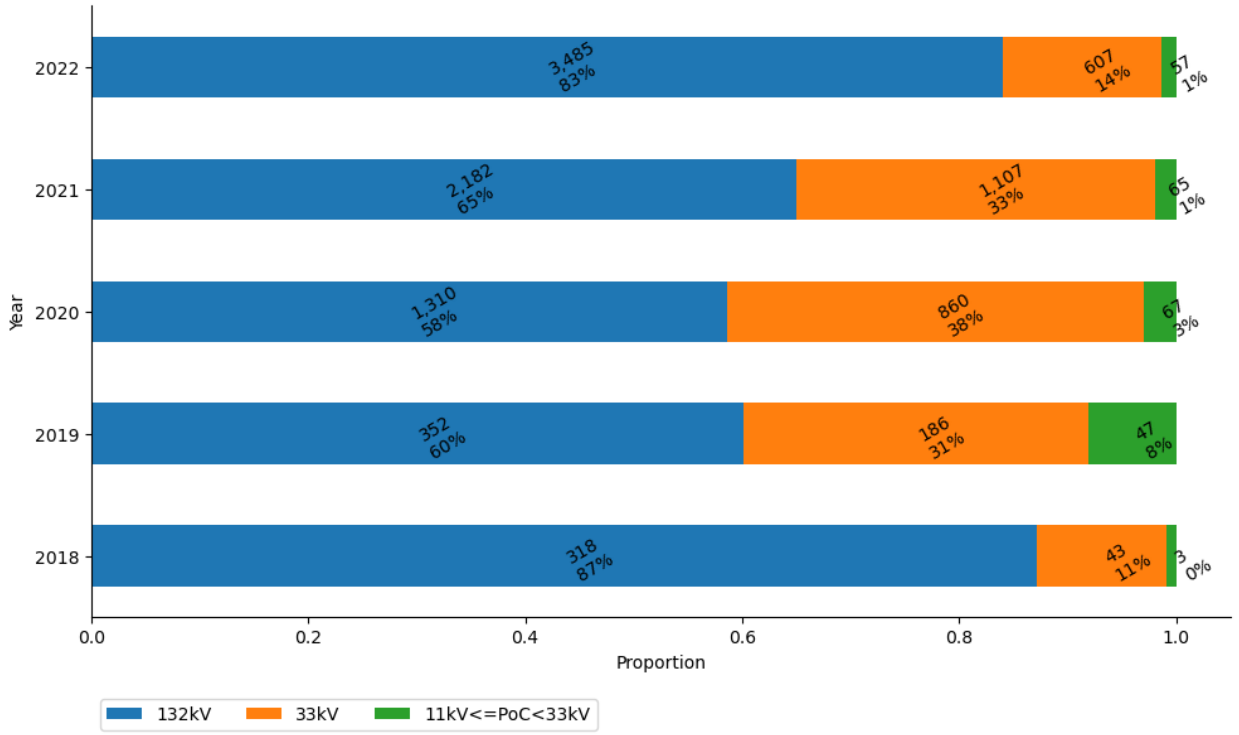


Figure 9-45: PoC Voltage by Year for Accepted Offers in South East England

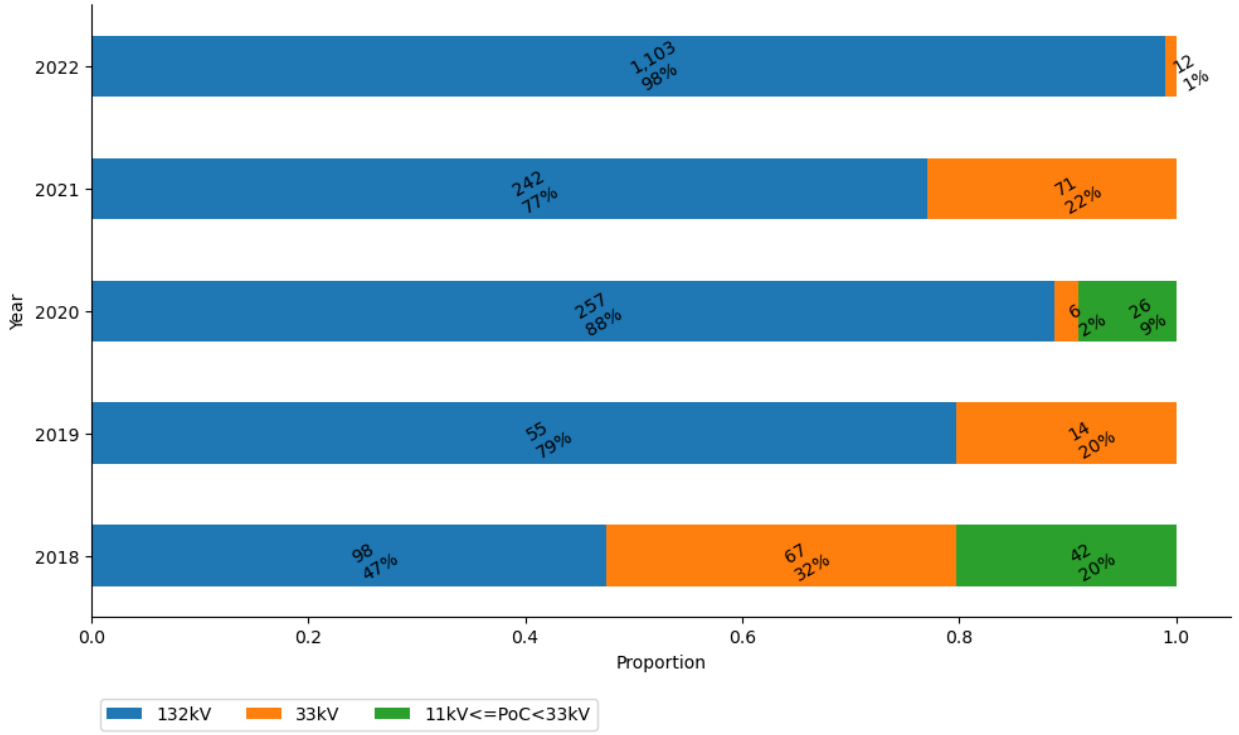


Figure 9-46: PoC Voltage by Year for Accepted Offers in North East England

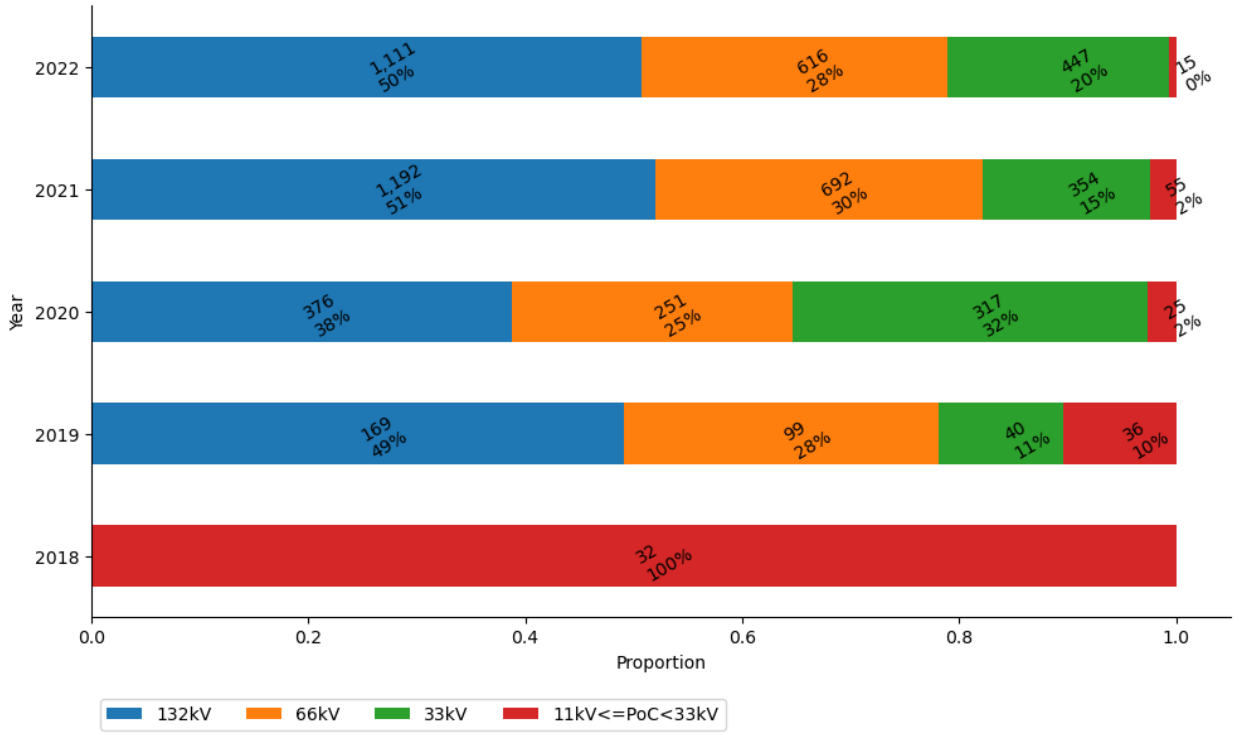


Figure 9-47: PoC Voltage by Year for Accepted Offers in Yorkshire

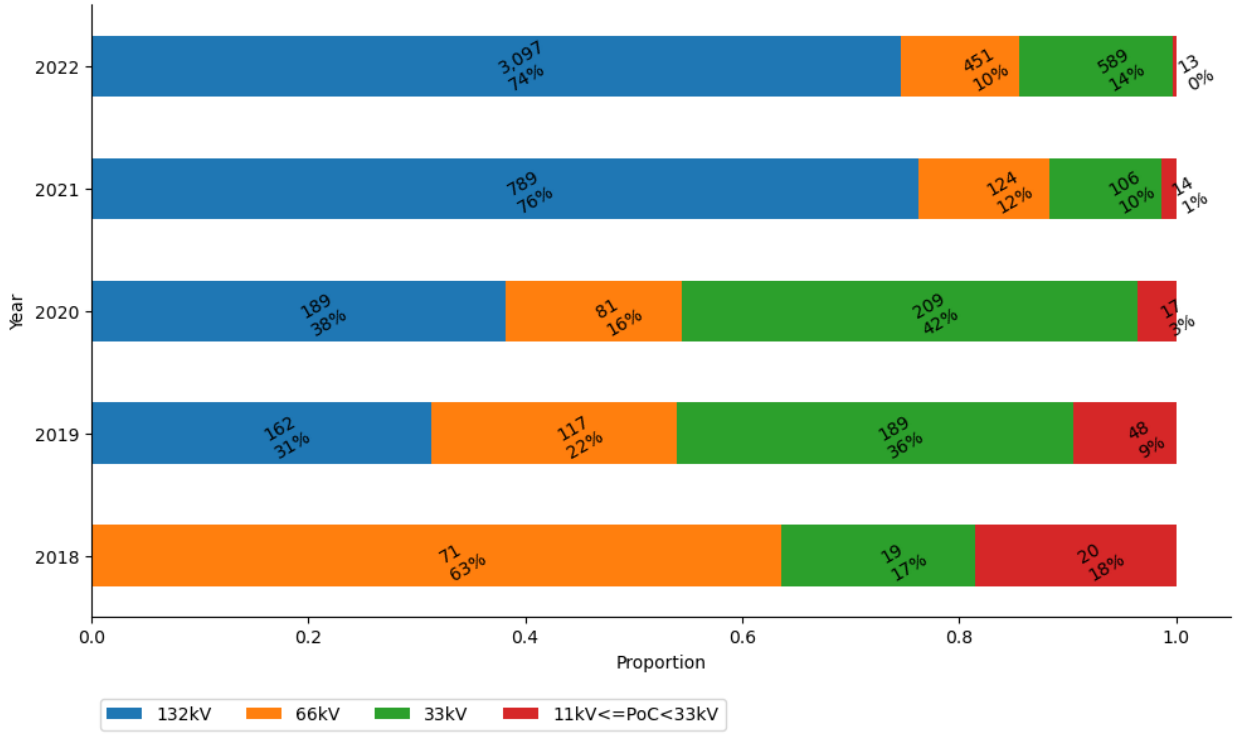
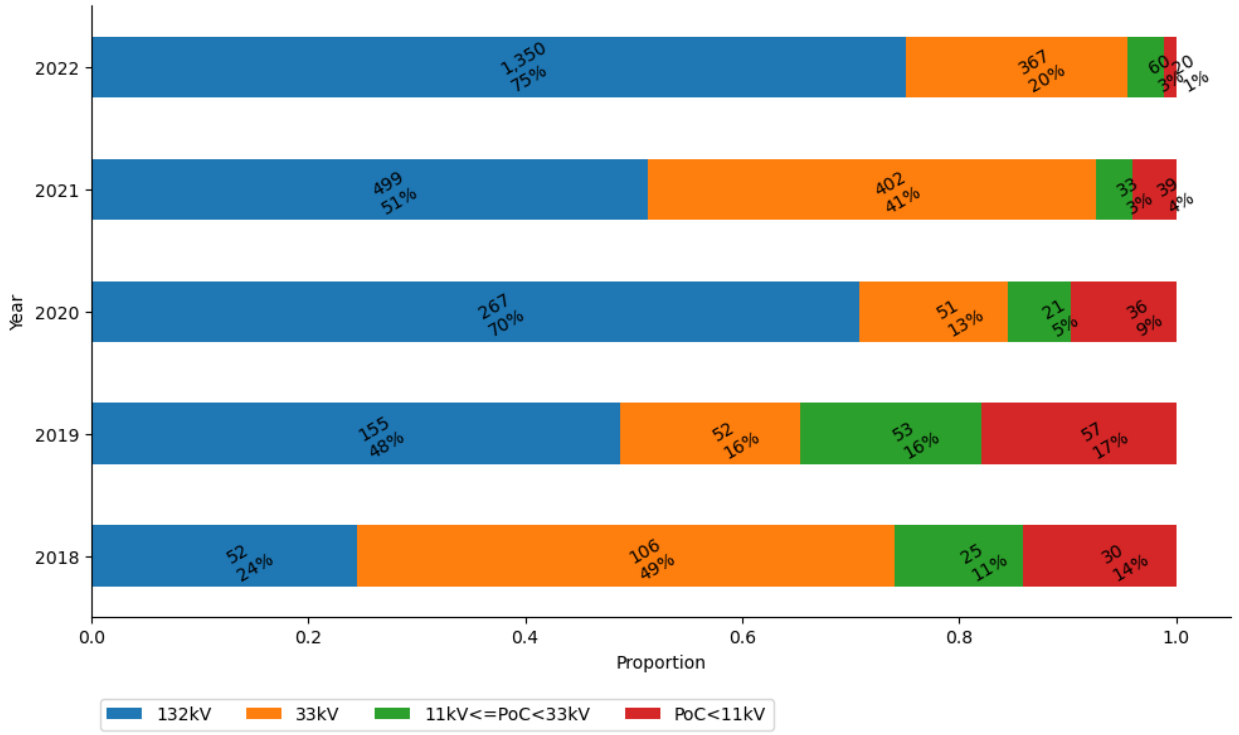


Figure 9-48: PoC Voltage by Year for Accepted Offers in North West England



Appendix K: Top Players of Accepted Offers in Each Technology Area at Individual Licence Area Level

Table 9-35: Top Players of Accepted Offers in Each Technology Area in East Midlands

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [1,502.0, 30.9%]	PATHFINDER CLEAN ENERGY [479.1, 5.8%]	ECOTRICITY [108.0, 67.9%]	HATTON SOLAR FARM LIMITED [49.9, 11.6%]
2	CLEARSTONE [299.7, 6.2%]	BLUESTONE ENERGY [467.4, 5.6%]	SWINFORD WIND FARM LIMITED [47.1, 29.6%]	GREEN FROG [46.4, 10.8%]
3	ELGIN ENERGY [258.0, 5.3%]	EXAGEN DEVELOPMENT LIMITED [450.0, 5.4%]	INFINITE RENEWABLES [3.0, 1.9%]	NEWHURST ERF LIMITED [46.0, 10.7%]
4	STARLIGHT ENERGY UK LIMITED [230.0, 4.7%]	JBM [412.4, 5.0%]	VICTRE LTD [1.0, 0.6%]	MERCIA POWER [36.4, 8.4%]
5	RE PROJECTS DEVELOPMENT LIMITED [200.0, 4.1%]	RIDGE CLEAR ENERGY LTD [408.0, 4.9%]	-	KSP RENEWABLES LIMITED [30.0, 7.0%]
Total	**[2,489.7, 51.2%]**	**[2,216.9, 26.6%]**	**[159.1, 100.0%]**	**[208.7, 48.4%]**

Table 9-36: Top Players of Accepted Offers in Each Technology Area in South Wales

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	SIRIUS [110.0, 27.5%]	JMB SOLAR PROJECTS 25 LTD [200.0, 11.1%]	CENIN [332.9, 24.6%]	PULSE CLEAN ENERGY UK LTD [66.2, 26.0%]
2	ENVIROMENA PROJECT MANAGEMENT UK LTD [99.9,	SIRIUS [160.0, 8.9%]	WIND 2 LTD [245.0, 18.1%]	SMS PLC [44.6, 17.5%]
3	GFV LIMITED [49.9, 12.5%]	STATKRAFT [120.0, 6.6%]	PENNANT WALTERS [162.1, 12.0%]	ENERGION LTD [40.0, 15.7%]
4	YLEM [49.5, 12.4%]	EEB [105.6, 5.9%]	WELSH GOVERNMENT [121.2, 9.0%]	HYDROCK [20.6, 8.1%]
5	ELAWAN ENERGY SL [25.0, 6.2%]	PATHFINDER CLEAN ENERGY [79.8, 4.4%]	CRAIG Y GEIFR WIND ENERGY HUB LIMITED [60.0, 4.4%]	GF173 LIMITED [20.0, 7.8%]
Total	**[334.3, 83.5%]**	**[665.4, 36.9%]**	**[921.2, 68.1%]**	**[191.4, 75.1%]**

Table 9-37: Top Players of Accepted Offers in Each Technology Area in South West England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	IMMERSA [338.2, 12.4%]	SOLAR CENTURY [319.6, 11.9%]	CLEAN EARTH ENERGY [29.9, 38.1%]	NATURAL POWER [140.0, 28.5%]
2	CONRAD [215.2, 7.9%]	PATHFINDER CLEAN ENERGY [297.0, 11.1%]	EVANS ENERGY [26.0, 33.1%]	EL (AVONMOUTH) LIMITED [49.9, 10.2%]
3	BSR [150.0, 5.5%]	JBM [164.8, 6.1%]	ALVESTON WIND PARK LIMITED [10.0, 12.7%]	RENESOLA HERCULES ENERGY 5 LIMITED [40.0, 8.1%]
4	GRIDSOURCE LIMITED [128.3, 4.7%]	EEB [115.0, 4.3%]	BLABLE LTD [8.5, 10.8%]	WAVE HUB LIMITED [35.0, 7.1%]
5	PATHFINDER CLEAN ENERGY [119.6, 4.4%]	RES UK & IRELAND LIMITED [100.8, 3.8%]	KL (JERSEY) LIMITED & KG (JERSEY) LTD [4.1, 5.2%]	CONRAD [32.6, 6.6%]
Total	**[951.3, 34.8%]**	**[997.2, 37.2%]**	**[78.6, 100.0%]**	**[297.5, 60.5%]**

Table 9-38: Top Players of Accepted Offers in Each Technology Area in West Midlands

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [436.0, 6.6%]	LOG 2 LIMITED [400.0, 8.2%]	-	BH ENERGY GAP (WALSALL LIMITED) [50.0, 15.6%]
2	BALANCE POWER [367.8, 5.5%]	JBM [396.4, 8.2%]	-	ENFINIUM KELVIN LIMITED; CHATTERLEY ENERGY STORAGE
3	ANGLO [349.0, 5.2%]	PATHFINDER CLEAN ENERGY [238.3, 4.9%]	-	CONRAD [22.8, 7.1%]
4	CELLARHEAD BESS LIMITED [280.0, 4.2%]	AURA POWER [229.6, 4.7%]	-	GREEN FROG; PADERO SOLAER LIMITED;
5	CONRAD [268.4, 4.0%]	ELGIN ENERGY [194.9, 4.0%]	-	ESMART NETWORKS [8.0, 2.5%]
Total	**[1,701.2, 25.6%]**	**[1,459.2, 30.0%]**	**-**	**[240.6, 75.0%]**

Table 9-39: Top Players of Accepted Offers in Each Technology Area in North Scotland

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	OPDE UK LTD [210.7, 7.5%]	DNO CONSULTING [229.6, 19.0%]	TNEI [525.6, 18.3%]	MERAKI CONSULTANTS LIMITED [94.9, 7.8%]
2	INTELLIGENT LAND INVESTMENTS GROUP PLC [149.8, 5.4%]	ECODEV GROUP [150.0, 12.4%]	RENEWABLE ENERGY SYSTEMS [185.5, 6.5%]	ANESCO [72.6, 6.0%]
3	NAREC DISTRIBUTED ENERGY [149.8, 5.4%]	GREEN ENERGY INTERNATIONAL [103.9, 8.6%]	WIND 2 LTD [177.0, 6.2%]	RENEWABLE ENERGY SYSTEMS [62.5, 5.1%]
4	ITP ENERGISED; THE ENERGY WORKSHOP [149.7, 5.4%]	ETHICAL POWER CONNECTIONS [101.6, 8.4%]	NATURAL POWER [163.9, 5.7%]	ADTEK LIMITED [59.0, 4.8%]
5	OPDE UK LIMITED [149.4, 5.3%]	SOLAR 2 [99.8, 8.3%]	EVANS ENERGY [150.0, 5.2%]	AGILE ENERGY RECOVERY (INVERURIE) LIMITED [55.0,
Total	**[959.1, 34.3%]**	**[684.9, 56.8%]**	**[1,202.1, 41.9%]**	**[344.0, 28.2%]**

Table 9-40: Top Players of Accepted Offers in Each Technology Area in Southern England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [248.0, 6.7%]	DNO CONSULTING [496.3, 10.6%]	-	DNO CONSULTING [301.3, 22.8%]
2	BALANCED GRID SOLUTIONS [202.0, 5.5%]	LOW CARBON [435.3, 9.3%]	-	SSE [117.5, 8.9%]
3	AB ENERGY AGENCY; SPE ELECTRICAL [200.0, 5.4%]	PUBLIC POWER SOLUTIONS [170.0, 3.6%]	-	SWECO [105.6, 8.0%]
4	ROADNIGHT TAYLOR [182.1, 4.9%]	INTELLIGENT ALTERNATIVES [159.0, 3.4%]	-	CONRAD [65.6, 5.0%]
5	PENSO POWER LIMITED [160.0, 4.3%]	AVON [150.0, 3.2%]	-	WHEELABRATOR TECHNOLOGIES (UK) LIMITED
Total	**[1,192.0, 32.4%]**	**[1,410.6, 30.2%]**	**-**	**[655.4, 49.5%]**

Table 9-41: Top Players of Accepted Offers in Each Technology Area in East England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [828.0, 20.2%]	LOW CARBON [887.5, 13.6%]	TCI RENEWABLES LIMITED [6.2, 39.0%]	DNO CONSULTING [99.9, 11.4%]
2	GREEN SWITCH CAPITAL LIMITED [696.0, 17.0%]	RNA-ENERGY [516.8, 7.9%]	CERTUS UTILITY [4.1, 26.0%]	MVV UMWELT GMBH [62.0, 7.0%]
3	SANDBROOK CAPITAL BES; MOTT MAC [200.0, 4.9%]	PATHFINDER CLEAN ENERGY [409.3, 6.3%]	MJS GRID SERVICES LTD [3.5, 22.2%]	FICHTNER CONSULTING ENGINEERS LTD [55.0, 6.2%]
4	SERRUYS PROPERTY COMPANY LTD [150.0, 3.7%]	ROADNIGHT TAYLOR [333.6, 5.1%]	NTL WORLD [2.0, 12.7%]	CONRAD [53.5, 6.1%]
5	RNA-ENERGY [149.5, 3.7%]	BLUESTONE ENERGY [248.0, 3.8%]	-	KNM ECO INNOVATIONS [52.0, 5.9%]
Total	**[2,223.5, 54.4%]**	**[2,395.2, 36.7%]**	**[15.8, 100.0%]**	**[322.4, 36.6%]**

Table 9-42: Top Players of Accepted Offers in Each Technology Area in South East England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [1,053.1, 52.5%]	TUPA SOLAR 1 LIMITED [49.9, 56.0%]	-	FICHTNER CONSULTING ENGINEERS LTD [55.0, 17.8%]
2	BALANCED GRID SOLUTIONS [200.3, 10.0%]	LOW CARBON [34.0, 38.1%]	-	CONRAD [39.5, 12.7%]
3	SKYFALL ENERGY LTD [99.9, 5.0%]	THAMES WATER [5.3, 5.9%]	-	METRICAB POWER ENGINEERING LIMITED [36.0,
4	PELAGIC ENERGY DEVELOPMENT LTD [94.8, 4.7%]	-	-	BRITANIACREST RECYCLING LTD [22.1, 7.1%]
5	RNA-ENERGY [53.7, 2.7%]	-	-	WELSH POWER [21.1, 6.8%]
Total	**[1,501.8, 74.9%]**	**[89.2, 100.0%]**	**-**	**[173.6, 56.0%]**

Table 9-43: Top Players of Accepted Offers in Each Technology Area in North East England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [240.0, 12.2%]	MILL LANE SOLAR PV [180.0, 5.3%]	HIGH HEDLEY WIND FARM [65.2, 100.0%]	SALTHOLME GAS [100.0, 15.8%]
2	CALIFORNIA HYBRID SOLAR & BESS [150.0, 7.6%]	DEWLEY HILL HYBRID BESS & SPV [150.0, 4.4%]	-	BLYTH [58.4, 9.2%]
3	COAST ROAD BESS [120.0, 6.1%]	SKEEBY [128.3, 3.8%]	-	REDCAR W2E; TOFFTS ROAD STEAM -
4	THINFORD STORAGE BESS [104.4, 5.3%]	SIKBEREEN SOLAR FARM [104.0, 3.1%]	-	TEES VALLEY ENERGY RECOVERY [49.9, 7.9%]
5	NEWCASTLE BATTERY STORAGE [99.8, 5.1%]	HOPEWELL HOUSE HYBRID SOLAR/BESS [100.6, 3.0%]	-	HARTMOOR 2 GAS [49.5, 7.8%]
Total	**[714.2, 36.3%]**	**[662.9, 19.5%]**	**[65.2, 100.0%]**	**[357.8, 56.7%]**

Table 9-44: Top Players of Accepted Offers in Each Technology Area in Yorkshire

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [1,489.0, 42.0%]	CREYKE BECK SOLAR [320.0, 12.8%]	PARK SPRING WIND FARM [8.5, 63.0%]	NETHERLANDS WAY VOLTA [120.0, 11.4%]
2	CHAPEL LANE BESS [250.0, 7.0%]	BLUESTONE ENERGY [278.0, 11.1%]	OMYA WIND FARM [3.0, 22.2%]	GRANGE [74.7, 7.1%]
3	AURA POWER [120.0, 3.4%]	KENLEY HOUSE GENERATION HUB;	KNOSTROP STW (ARUP) WIND TURBINE [2.0, 14.8%]	HRS BIOMASS [63.0, 6.0%]
4	PEAT DYKE FARM BESS; LOWFIELDS WAY BESS [100.0,	SANTON SOLAR FARM [99.9, 4.0%]	-	STAITHES ROAD MIXED TECHNOLOGY (SALTEND
5	BIERLOW BATTERY ENERGY STORAGE [99.9, 2.8%]	BARLOW SOLAR [99.9, 4.0%]	-	QUEENS ROAD TURBINE [50.0, 4.7%]
Total	**[2,158.9, 60.9%]**	**[1,097.8, 43.8%]**	**[13.5, 100.0%]**	**[357.6, 34.0%]**

Table 9-45: Top Players of Accepted Offers in Each Technology Area in North Wales, Merseyside and Cheshire

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [190.0, 48.4%]	COUNTRYSIDE RENEWABLES [49.9, 34.6%]	CLOCAENOG [96.0, 48.2%]	PEEL ENVIRONMENTAL [133.8, 17.1%]
2	VOX ENERGY [49.9, 12.7%]	SBC-1351 [13.4, 9.3%]	INNOGY [32.5, 16.3%]	SNOWDONIA PUMPED HYDRO (QUARRY BATTERY
3	SHAWTON ENGINEERING [40.0, 10.2%]	MOSS_FARM [11.1, 7.7%]	VATTENFALL [27.0, 13.6%]	UTILITY RECOVERIES SPECIALISTS LTD [89.0, 11.4%]
4	ATON ENERGY [25.0, 6.4%]	GOURTON HALL [11.0, 7.6%]	PANT Y MAEN WIND FARM [20.0, 10.0%]	ENSO ENERGY [30.0, 3.8%]
5	LEIGHTON HALL FARM [20.0, 5.1%]	BE RENEWABLES [10.0, 6.9%]	NJORD ENERGY [13.8, 6.9%]	COGEN [28.0, 3.6%]
Total	**[324.9, 82.7%]**	**[95.4, 66.2%]**	**[189.3, 95.0%]**	**[380.7, 48.7%]**

Table 9-46: Top Players of Accepted Offers in Each Technology Area in South and Central Scotland

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [939.0, 29.4%]	ELGIN ENERGY [198.8, 22.0%]	ENERGIE KONTOR [225.5, 13.5%]	H P TROTTER T/A PRINTONAN FARM [51.0, 8.5%]
2	RNA-ENERGY [288.9, 9.1%]	BLUESTONE ENERGY [137.7, 15.2%]	CLEANEARTH ENERGY [105.9, 6.3%]	EARLS GATE ENERGY CENTRE [49.5, 8.3%]
3	VITAL ENERGI [151.2, 4.7%]	LOCOGEN [89.9, 9.9%]	MUIRHALL ENERGY [88.5, 5.3%]	PEEL ENVIRONMENTAL [36.6, 6.1%]
4	ROARING HILL ENERGY STORAGE LTD [79.8, 2.5%]	LOCOGEN SOLAR DEVELOPMENTS LTD [85.0,	LEITHENWATER WIND ENERGY HUB LIMITED [72.6, 4.3%]	ENER-VATE CONSULTANCY LTD, [29.9, 5.0%]
5	BEARSDEN BESS LIMITED [71.8, 2.3%]	NATURALIS ENERGY DEVELOPMENTS [60.0, 6.6%]	WILLOWIND ENERGY [67.2, 4.0%]	SOUTH LANARKSHIRE BIO POWER LTD [29.0, 4.9%]
Total	**[1,530.7, 48.0%]**	**[571.4, 63.2%]**	**[559.7, 33.5%]**	**[196.0, 32.8%]**

Table 9-47: Top Players of Accepted Offers in Each Technology Area in North West England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUESTONE ENERGY [350.0, 12.6%]	CXGROUP [150.0, 20.4%]	PEEL CUBICO RENEWABLES LIMITED [100.0, 78.4%]	STOR [373.7, 36.0%]
2	ENERGI GENERATION [314.9, 11.4%]	VATTENFALL; ROADNIGHT TAYLOR; HARMONY ENERGY LTD [49.9, 6.8%]	ENERGY CONTOUR [8.6, 6.8%]	MT GREEN POWER LTD [50.5, 4.9%]
3	QUEEQUEG RENEWABLES LTD [145.3, 5.2%]	INNOVA [47.4, 6.4%]	HAMBLEDON WIND LTD [7.9, 6.2%]	ENWL CONSTRUCTION & MAINTENANCE LTD [45.6,
4	BALANCE POWER [130.0, 4.7%]	OPDE UK LIMITED [40.0, 5.4%]	RIDGE CLEAN ENERGY [7.0, 5.5%]	ALKANE ENERGY [44.7, 4.3%]
5	STOR [129.9, 4.7%]	S4N CORYTON LTD [32.6, 4.4%]	O&G GROUP LIMITED [4.0, 3.1%]	HARTMOOR HOLDINGS LIMITED [42.1, 4.1%]
Total	**[1,070.1, 38.6%]**	**[419.7, 57.0%]**	**[127.5, 100.0%]**	**[556.6, 53.6%]**

Appendix L: Top Players of Accepted Offers in Each Year Since 2018 at Individual Licence Area Level

Table 9-48: Top Players of Accepted Offers in Each Year Since 2018 in East Midlands

Top Player/Year	2018	2019	2020	2021	2022
1	EEB [125.0, 28.9%]	LIGHTSOURCE [183.5, 28.1%]	EDF [179.8, 11.3%]	EXAGEN DEVELOPMENT LIMITED [280.0, 8.5%]	BLUESTONE ENERGY [1,831.4, 24.7%]
2	ENDERBY STORAGE LIMITED; NEWTONWOOD ENERGY	JBM [97.9, 15.0%]	JBM [174.7, 11.0%]	SCHOSWEEN 250 LIMITED [150.0, 4.6%]	PATHFINDER CLEAN ENERGY [497.6, 6.7%]
3	STATERA ENERGY LIMITED [49.9, 11.6%]	LOW CARBON [80.0, 12.2%]	EEB [109.9, 6.9%]	BLUESTONE ENERGY [138.0, 4.2%]	RIDGE CLEAR ENERGY LTD [408.0, 5.5%]
4	NEXTPOWER SPV [37.0, 8.6%]	YELVERTOFT [50.0, 7.6%]	KS SPV [88.0, 5.5%]	ENIF BESS LIMITED [120.0, 3.7%]	STARLIGHT ENERGY UK LIMITED [350.0, 4.7%]
5	STONY ENERGY STORAGE LIMITED [30.0, 6.9%]	SCOTTISHPOWER RENEWABLES [40.0, 6.1%]	VICARAGE DROVE ENERGY CENTRE LIMITED	INNOVA [103.8, 3.2%]	CLEARSTONE [299.7, 4.0%]
Total	**[341.9, 79.2%]**	**[451.4, 69.1%]**	**[622.4, 39.1%]**	**[791.8, 24.1%]**	**[3,386.7, 45.7%]**

Table 9-49: Top Players of Accepted Offers in Each Year Since 2018 in South Wales

Top Player/Year	2018	2019	2020	2021	2022
1	RUSH WALL SOLAR PARK LIMITED [50.0, 51.3%]	CENIN [103.4, 21.1%]	STATKRAFT [120.0, 15.4%]	JMB SOLAR PROJECTS 25 LTD [200.0, 20.2%]	WIND 2 LTD [245.0, 21.9%]
2	MYNYDD FFORCH DWM WIND ENERGY LTD [27.0, 27.7%]	EEB [75.0, 15.3%]	PENNANT WALTERS [100.6, 12.9%]	CENIN [101.5, 10.2%]	WELSH GOVERNMENT [121.2, 10.8%]
3	AWEL Y GWRHYD CIC [13.7, 14.1%]	SIRIUS [50.0, 10.2%]	SIRIUS [100.0, 12.8%]	PULSE CLEAN ENERGY UK LTD [81.2, 8.2%]	CENIN [106.0, 9.5%]
4	AWEL AMAN TAWE [4.7, 4.8%]	COLLINGWOOD STREET SOLAR LIMITED [49.9, 10.2%]	CENIN [62.0, 7.9%]	GFV LIMITED [79.9, 8.1%]	SIRIUS [100.0, 8.9%]
5	ABSOLUTE SOLAR & WIND [1.3, 1.3%]	WENTLOOGE SOLAR PROJECT LIMITED [36.0, 7.4%]	GREAT HOUSE ENERGY CENTRE [50.0, 6.4%]	CRAIG Y GEIFR WIND ENERGY HUB LIMITED [60.0, 6.1%]	ENVIROMENA PROJECT MANAGEMENT UK LTD [99.9, 8.9%]
Total	**[96.7, 99.3%]**	**[314.3, 64.2%]**	**[432.5, 55.5%]**	**[522.6, 52.7%]**	**[672.1, 60.0%]**

Table 9-50: Top Players of Accepted Offers in Each Year Since 2018 in South West England

Top Player/Year	2018	2019	2020	2021	2022
1	JBM [84.9, 32.1%]	EEB [75.0, 36.9%]	SOLAR CENTURY [246.4, 33.8%]	CONRAD [170.8, 10.2%]	PATHFINDER CLEAN ENERGY [416.6, 13.9%]
2	AURA POWER [80.0, 30.2%]	ND SOLAR ENTERPRISES LIMITED [49.9, 24.6%]	LIGHTROCK POWER LTD [74.8, 10.3%]	NATURAL POWER [140.0, 8.3%]	IMMERSA [298.2, 10.0%]
3	COLDHARBOUR FARM SOLAR PARK LIMITED [50.0, 18.9%]	EVANS ENERGY [21.0, 10.3%]	PUBLIC POWER SOLUTIONS LTD [50.0, 6.9%]	JBM [114.9, 6.8%]	BSR [180.0, 6.0%]
4	FEEDER GRID STORAGE LIMITED;	FPC INDUSTRY & ENTERPRISE 2	REGENER8 POWER [49.9, 6.8%]	RES UK & IRELAND LIMITED [100.8, 6.0%]	GRIDSOURCE LIMITED [128.3, 4.3%]
5	ALLER LANGPORT SOLAR PARK LTD [10.0, 3.8%]	SPRING DEV [10.0, 4.9%]	WINDEL [48.0, 6.6%]	PENSO POWER LIMITED [99.9, 6.0%]	AURA POWER [119.8, 4.0%]
Total	**[264.9, 100.0%]**	**[170.9, 84.1%]**	**[469.1, 64.4%]**	**[626.4, 37.3%]**	**[1,142.9, 38.1%]**

Table 9-51: Top Players of Accepted Offers in Each Year Since 2018 in West Midlands

Top Player/Year	2018	2019	2020	2021	2022
1	SINCLAIR WORKS ENERGY CENTRE LIMITED [50.0,	PERIDOT SOLAR (GRIDCO) LIMITED [100.0, 12.3%]	AURA POWER [199.6, 16.5%]	CELLARHEAD BESS LIMITED [280.0, 7.8%]	BLUESTONE ENERGY [530.9, 8.8%]
2	HM PH (GP) LIMITED [4.5, 8.3%]	JBM [99.8, 12.3%]	JBM [144.8, 12.0%]	ANGLO [249.2, 7.0%]	LOG 2 LIMITED [400.0, 6.6%]
3	-	JRB GENERATION LTD [99.4, 12.3%]	DNO CONSULTING [106.0, 8.8%]	INNOVA [199.7, 5.6%]	CONRAD [268.4, 4.4%]
4	-	BH ENERGY GAP (WALSALL LIMITED) [50.0, 6.2%]	ELGIN ENERGY [105.0, 8.7%]	RE PROJECTS DEVELOPMENT LIMITED [174.9, 4.9%]	DNO CONSULTING [249.7, 4.1%]
5	-	WORLD'S END FARM SOLAR PARK	BLYTHE HOUSE SOLAR FARM LIMITED [80.0,	JBM [129.8, 3.6%]	FPC ELECTRIC LAND [240.0, 4.0%]
Total	**[54.5, 100.0%]**	**[399.2, 49.3%]**	**[635.4, 52.5%]**	**[1,033.6, 28.9%]**	**[1,689.0, 27.9%]**

Table 9-52: Top Players of Accepted Offers in Each Year Since 2018 in North Scotland

Top Player/Year	2018	2019	2020	2021	2022
1	ORKNEY ISLANDS COUNCIL [73.5, 33.2%]	TNEI [120.2, 23.6%]	TNEI [118.8, 14.8%]	RENEWABLE ENERGY SYSTEMS [179.7, 9.8%]	OPDE UK LTD [263.4, 6.9%]
2	AQUATERA LTD; NORTHWIND	VATTENFALL [77.0, 15.1%]	XERO ENERGY [69.0, 8.6%]	TNEI [118.8, 6.5%]	TNEI [252.1, 6.6%]
3	FORSA [22.5, 10.2%]	DRUIM LEATHANN WINDFARM LIMITED [49.7, 9.8%]	NATURAL POWER [59.7, 7.5%]	AVON [99.9, 5.4%]	DNO CONSULTING [204.8, 5.3%]
4	MUIRDEN ENERGY LLP; THE GRID CONSULTANT	BEN SCA WIND FARM LTD [40.8, 8.0%]	INNOGY [55.0, 6.9%]	NAREC DISTRIBUTED ENERGY [99.9, 5.4%]	ANESCO [169.9, 4.4%]
5	FORSTER ENERGY LTD [10.0, 4.5%]	E.ON [38.0, 7.5%]	ESB ENGINEERING & MAJOR PROJECTS [50.0, 6.2%]	THE ENERGY WORKSHOP [99.8, 5.4%]	EVANS ENERGY [150.0, 3.9%]
Total	**[206.0, 93.0%]**	**[325.7, 63.9%]**	**[352.5, 44.0%]**	**[598.1, 32.5%]**	**[1,040.2, 27.2%]**

Table 9-53: Top Players of Accepted Offers in Each Year Since 2018 in Southern England

Top Player/Year	2018	2019	2020	2021	2022
1	WHEELABRATOR TECHNOLOGIES (UK)	DNO CONSULTING [157.8, 18.8%]	LOW CARBON [150.5, 10.4%]	SPE ELECTRICAL; AVON [200.0, 10.4%]	DNO CONSULTING [251.3, 6.0%]
2	CAPBAL [40.0, 23.8%]	BSR [80.0, 9.5%]	DNO CONSULTING [137.8, 9.6%]	BLUESTONE ENERGY [150.0, 7.8%]	CONRAD [248.2, 6.0%]
3	STERLING POWER UTILITIES [20.0, 11.9%]	LOW CARBON [65.0, 7.7%]	RE PROJECTS DEVELOPMENT LIMITED [123.0, 8.5%]	LOW CARBON [100.0, 5.2%]	GEW2 LTD [200.5, 4.8%]
4	TNEI [19.5, 11.6%]	GREEN HEDGE ENERGY BARN [60.0, 7.1%]	PENSO POWER LIMITED [110.0, 7.6%]	TNEI [99.9, 5.2%]	AB ENERGY AGENCY [200.0, 4.8%]
5	PPS LTD [12.0, 7.2%]	AURA POWER [50.0, 6.0%]	PUBLIC POWER SOLUTIONS [100.0, 6.9%]	DNO CONSULTING [93.5, 4.9%]	ROADNIGHT TAYLOR [182.1, 4.4%]
Total	**[156.8, 93.4%]**	**[412.8, 49.2%]**	**[621.3, 43.1%]**	**[843.4, 44.0%]**	**[1,082.0, 26.0%]**

Table 9-54: Top Players of Accepted Offers in Each Year Since 2018 in East England

Top Player/Year	2018	2019	2020	2021	2022
1	SAVILLS [50.0, 13.7%]	DNO CONSULTING [149.9, 25.6%]	LOW CARBON [329.8, 14.7%]	RNA-ENERGY [316.0, 9.4%]	BLUESTONE ENERGY [910.0, 21.9%]
2	ENSO ENERGY [50.0, 13.7%]	BSR [87.5, 14.9%]	PATHFINDER CLEAN ENERGY [206.5, 9.2%]	LOW CARBON [242.0, 7.2%]	GREEN SWITCH CAPITAL LIMITED [853.6, 20.6%]
3	AXA INVESTMENT MANAGERS [49.5, 13.5%]	MJS GRID SERVICES LTD [73.4, 12.5%]	SOLAR CENTURY [180.0, 8.0%]	CERTUS UTILITY [153.6, 4.6%]	LOW CARBON [284.0, 6.8%]
4	MGMATRIX LTD [49.0, 13.4%]	ATON ENERGY [50.0, 8.5%]	ANESCO [164.4, 7.3%]	SERRUYS PROPERTY COMPANY LTD [150.0, 4.5%]	ROADNIGHT TAYLOR [224.8, 5.4%]
5	DNO CONSULTING [40.0, 10.9%]	DNOC [40.0, 6.8%]	RNA-ENERGY [120.9, 5.4%]	BLUESTONE ENERGY [138.0, 4.1%]	MOTT MAC [200.0, 4.8%]
Total	**[238.5, 65.3%]**	**[400.8, 68.3%]**	**[1,001.6, 44.8%]**	**[999.6, 29.8%]**	**[2,472.5, 59.6%]**

Table 9-55: Top Players of Accepted Offers in Each Year Since 2018 in South East England

Top Player/Year	2018	2019	2020	2021	2022
1	BALANCED GRID SOLUTIONS [98.9, 47.5%]	FICHTNER CONSULTING ENGINEERS LTD [55.0,	SKYFALL ENERGY LTD [99.9, 34.5%]	PELAGIC ENERGY DEVELOPMENT LTD [94.8,	BLUESTONE ENERGY [1,053.1, 94.4%]
2	G59 PROFESSIONAL SERVICES LTD [36.0, 17.3%]	DS SMITH PAPER LIMITED [14.0, 20.3%]	BALANCED GRID SOLUTIONS; ENVIROTECH ENERGY	SOLAR CENTURY [50.0, 15.9%]	TUPA SOLAR 1 LIMITED [49.9, 4.5%]
3	CONRAD [27.5, 13.2%]	-	BRITANIACREST RECYCLING LTD [22.1, 7.6%]	BALANCE POWER [49.9, 15.9%]	BIOGAS TECHNOLOGY LIMITED [12.0, 1.1%]
4	WELSH POWER [21.1, 10.1%]	-	GRIDSERVE EMEA DEPC LTD [6.3, 2.2%]	JBM [47.4, 15.1%]	-
5	PPS LTD [10.0, 4.8%]	-	RNA-ENERGY [4.2, 1.5%]	THE WOOLADON ESTATE LIMITED [37.9, 12.1%]	-
Total	**[193.5, 92.9%]**	**[69.0, 100.0%]**	**[289.7, 100.0%]**	**[280.0, 89.2%]**	**[1,115.0, 100.0%]**

Table 9-56: Top Players of Accepted Offers in Each Year Since 2018 in North East England

Top Player/Year	2018	2019	2020	2021	2022
1	CHAPEL LANE DIESEL - NON	HELL HOLE & LOW MIDDLEFIELD	CALIFORNIA HYBRID SOLAR & BESS [150.0,	MILL LANE SOLAR PV [180.0, 7.8%]	BLUESTONE ENERGY [240.0, 11.0%]
2	SUNDERLAND, DEPTFORD TERRACE, SUNDERLAND	HULAM FARM PV; REDCAR W2E;	NEWCASTLE BATTERY STORAGE [99.8, 10.3%]	THINFORD STORAGE BESS [104.4, 4.5%]	DEWLEY HILL HYBRID BESS &
3	BROKEN SCAR WTW PV [3.1, 9.5%]	SEAL SANDS HRS BIOMASS; SOUTH LOWFIELD PV [40.0, 11.6%]	LOW MOOR SOLAR & BESS [99.8, 10.3%]	SIKBEREEN SOLAR FARM [104.0, 4.5%]	COAST ROAD BESS [120.0, 5.5%]
4	ALNE MATERIAL RECYCLING FACILITY [2.0,	YORK POTASH - SIRIUS [23.0, 6.6%]	HULL ROAD BESS; WOOLPOTS FARM PV	HOPEWELL HOUSE HYBRID SOLAR/BESS [100.6, 4.4%]	CHOPWELL HYBRID [100.4, 4.6%]
5	NON-EXPORTING PV, LUMLEY TREATMENT WORKS [1.6, 4.9%]	DERWENTHAUGH ECO PARK - HV GAS [10.0, 2.9%]	MURTON SOLAR FARM [45.0, 4.6%]	SKEEBY [89.3, 3.9%]	SALTHOLME GAS [100.0, 4.6%]
Total	**[31.2, 96.2%]**	**[343.0, 99.1%]**	**[494.3, 50.9%]**	**[578.3, 25.2%]**	**[710.4, 32.4%]**

Table 9-57: Top Players of Accepted Offers in Each Year Since 2018 in Yorkshire

Top Player/Year	2018	2019	2020	2021	2022
1	GRANGE [68.7, 61.2%]	NETHERLANDS WAY VOLTA [120.0, 23.2%]	HAROP LANE [87.0, 17.5%]	CREYKE BECK SOLAR [320.0, 30.9%]	BLUESTONE ENERGY [1,767.0, 42.6%]
2	PORT OF HULL DEVELOPMENT [19.9,	SCURF DYKE SOLAR [50.0, 9.7%]	BAWTRY SOLAR FARM [51.0, 10.3%]	AURA POWER [120.0, 11.6%]	CHAPEL LANE BESS [250.0, 6.0%]
3	HOWDENS JOINERY NON-EXPORTING GENERATION	SKELTON PEAK GAS [49.3, 9.5%]	EALAND SOLAR FARM [50.0, 10.1%]	LOWFIELDS WAY BESS [100.0, 9.7%]	WEST GRIMSBY FARM; KENLEY HOUSE
4	MELTON ROSS QUARRIES [3.5, 3.1%]	CAMELA LANE SOLAR [49.0, 9.5%]	GRIMSBY; CHAPEL LANE PV; WEST MELTON BESS [49.9,	BSB TRANSPORT BESS [80.0, 7.7%]	PEAT DYKE FARM BESS [100.0, 2.4%]
5	GREEN PARK ASKERN CAPACITY ALTERATION [2.7, 2.4%]	SOUTH ROAD CHP [45.0, 8.7%]	IDNO ROUTH40 [40.0, 8.0%]	REDCOTE LANE [60.0, 5.8%]	BIERLOW BATTERY ENERGY STORAGE [99.9, 2.4%]
Total	**[98.4, 87.7%]**	**[313.3, 60.5%]**	**[377.7, 75.9%]**	**[680.0, 65.7%]**	**[2,516.9, 60.6%]**

Table 9-58: Top Players of Accepted Offers in Each Year Since 2018 in North West England

Top Player/Year	2018	2019	2020	2021	2022
1	WELKIN MILL POWER LIMITED [52.6, 24.5%]	SUEZ RECYCLING AND RECOVERY UK LTD [52.6, 16.5%]	INNOVA [58.4, 15.5%]	ENERGI GENERATION [269.9, 27.7%]	BLUESTONE ENERGY [350.0, 18.9%]
2	S4N CORYTON LTD [32.6, 15.2%]	CORIOLIS ENERGY [52.5, 16.5%]	SMITH BROTHERS [49.9, 13.2%]	FPC ELECTRIC LAND [102.0, 10.5%]	QUEEQUEG RENEWABLES LTD [156.3, 8.5%]
3	ELECTRICITY NORTH WEST (CONSTRUCTION & MAINTENANCE) LTD [31.6, 14.7%]	MT GREEN POWER LTD [50.5, 15.8%]	ENWL CONSTRUCTION & MAINTENANCE LTD [45.6, 12.1%]	LANCASTER POWER LIMITED [75.0, 7.7%]	CXGROUP [150.0, 8.1%]
4	LIGHTSOURCE; BRIMROD ENERGY CENTRE LIMITED [21.1,	ABERLA SERVICES [31.6, 9.9%]	GRID SERVE; OPDE UK LIMITED [40.0, 10.6%]	EUROPEAN ENERGY DEV LTD [50.0, 5.1%]	BALANCE POWER; PEEL CUBICO RENEWABLES LIMITED
5	BALANCE POWER [7.8, 3.6%]	SMITH BROTHERS [31.0, 9.7%]	VEOLIA [35.8, 9.5%]	FLEXION ENERGY UK STORAGE LTD [49.9, 5.1%]	STOR [99.9, 5.4%]
Total	**[166.7, 77.7%]**	**[218.3, 68.4%]**	**[269.7, 71.5%]**	**[546.8, 56.1%]**	**[956.2, 51.7%]**

Appendix M: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players at Individual Licence Area Level

Figure 9-49: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in East Midlands

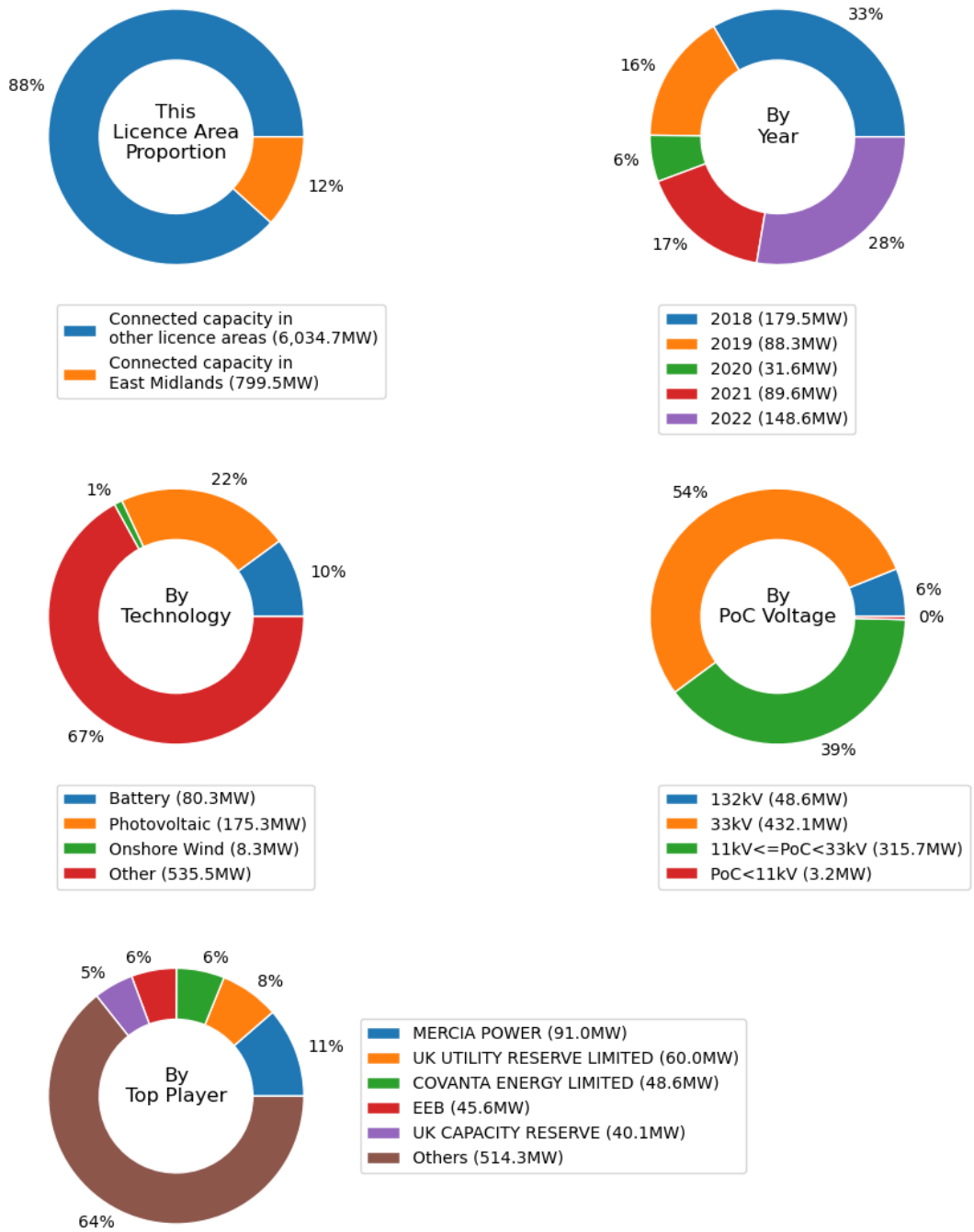


Figure 9-50: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in South Wales

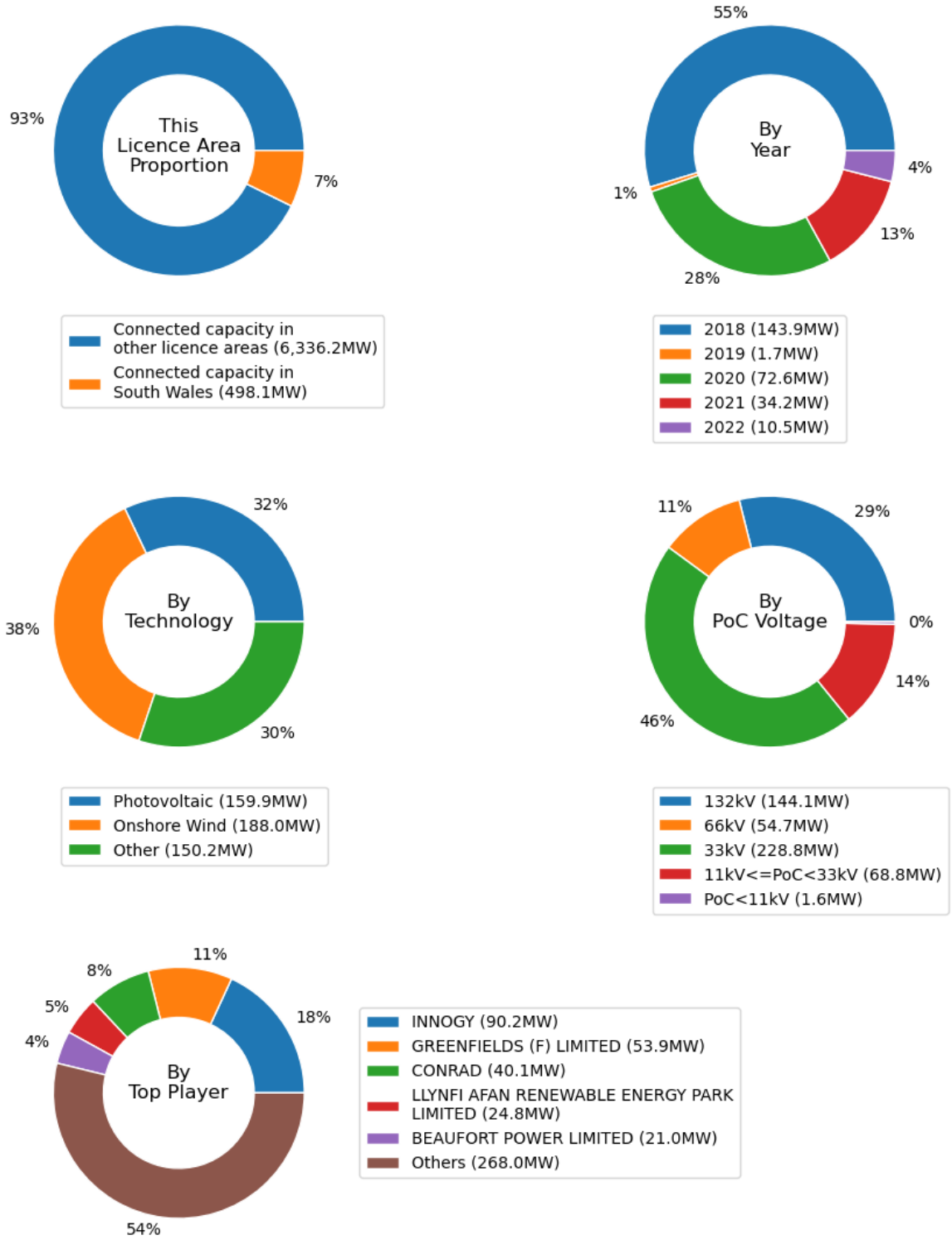


Figure 9-51: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in South West England

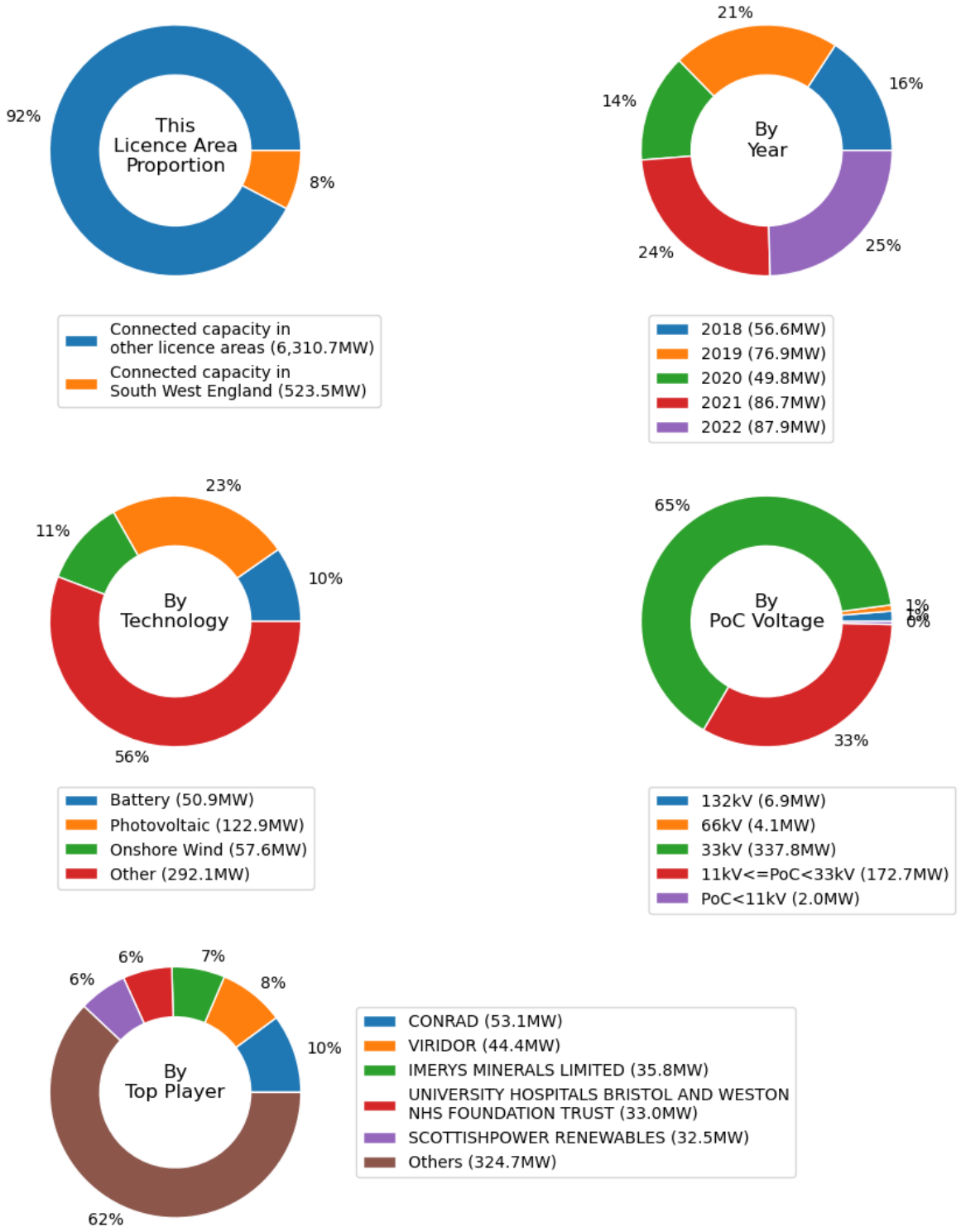


Figure 9-52: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in West Midlands

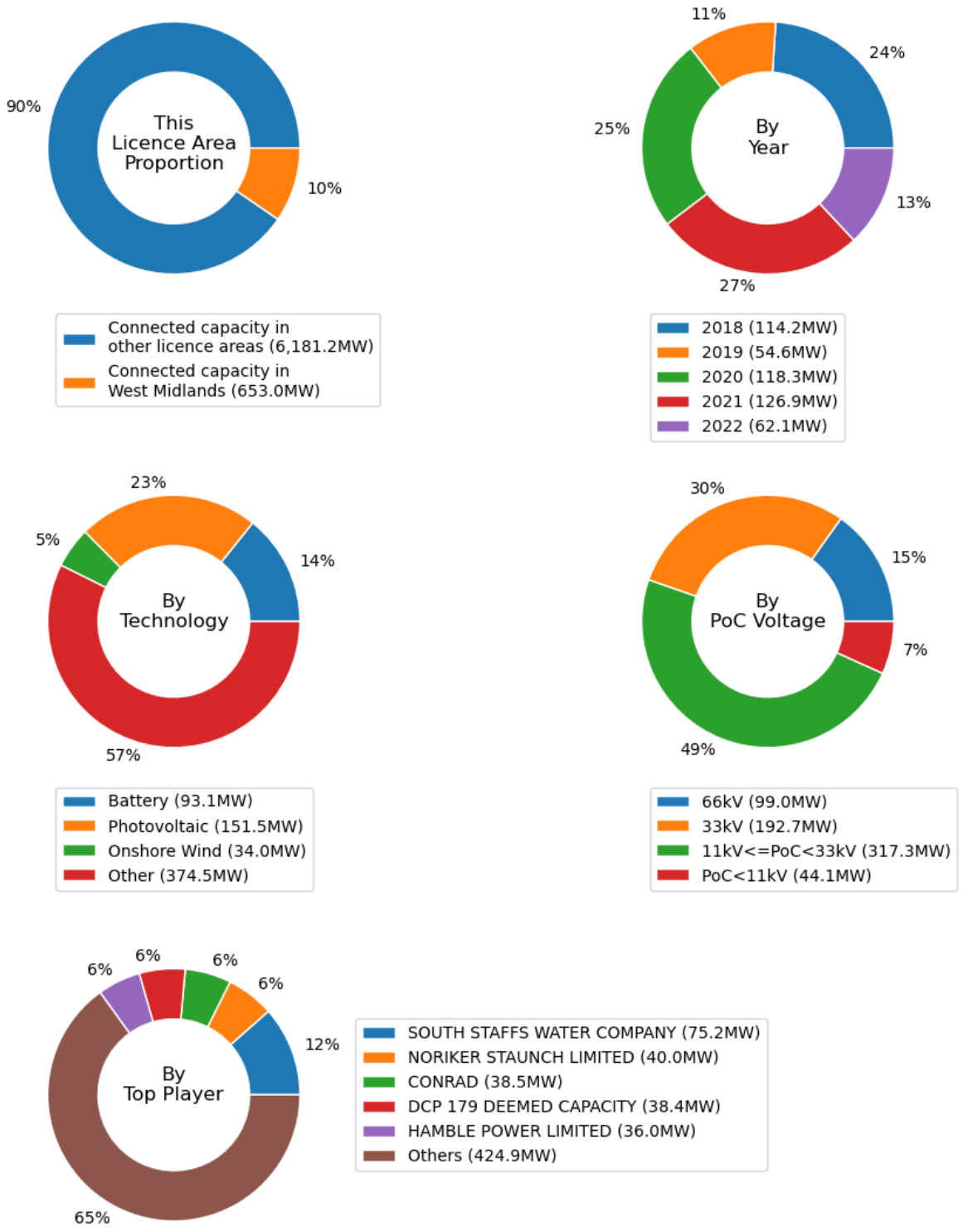


Figure 9-53: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in North Scotland

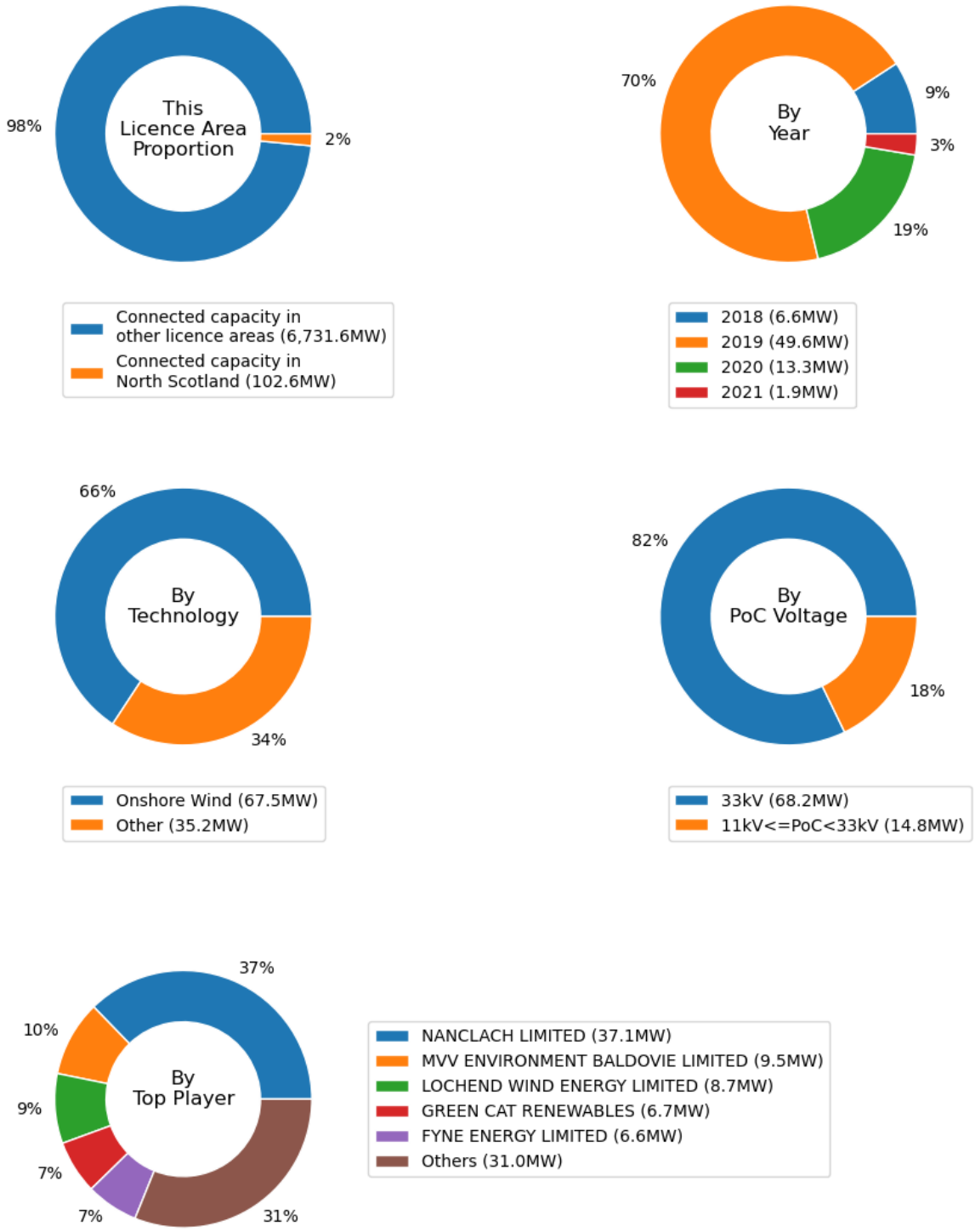


Figure 9-54: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in Southern England

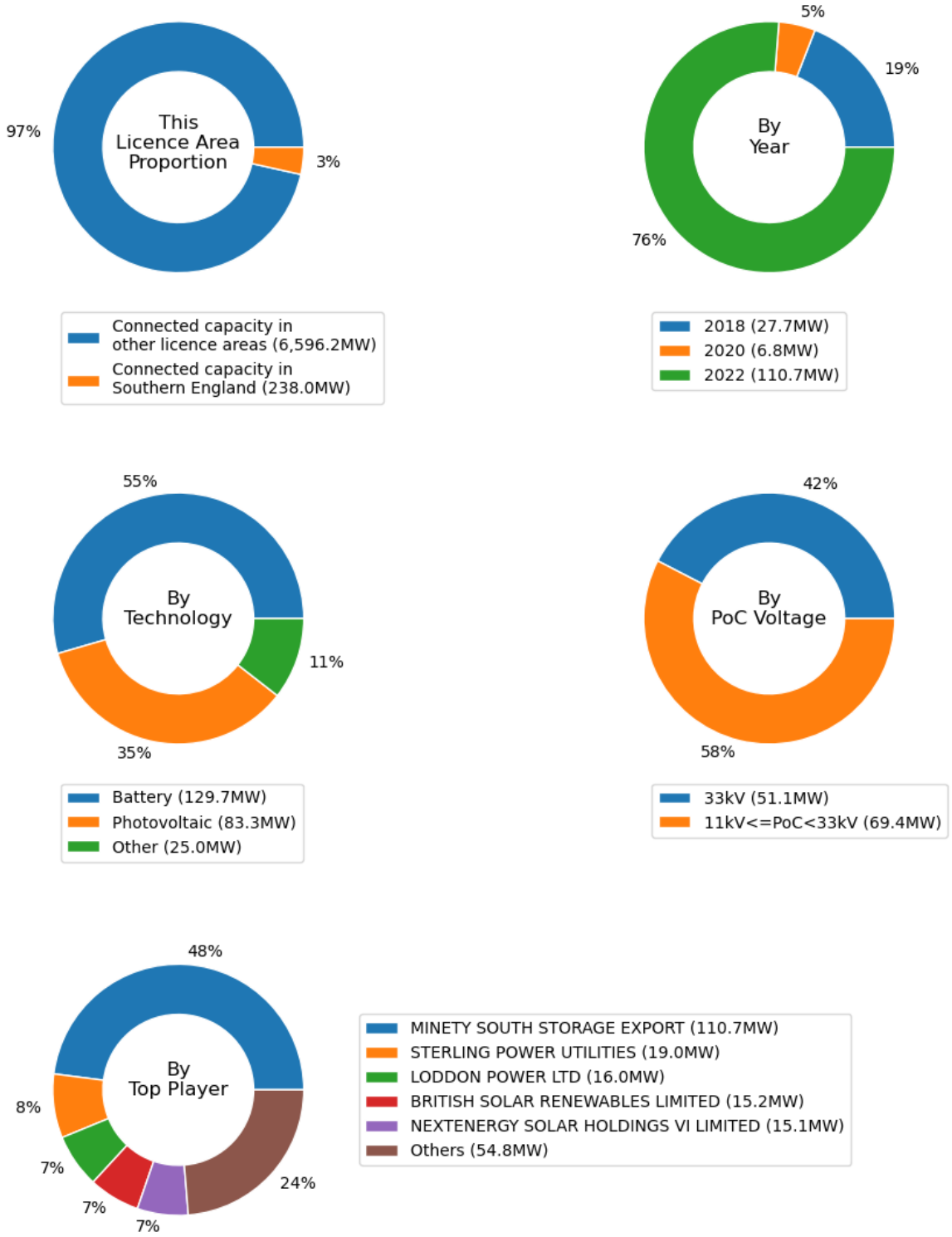


Figure 9-55: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in East England

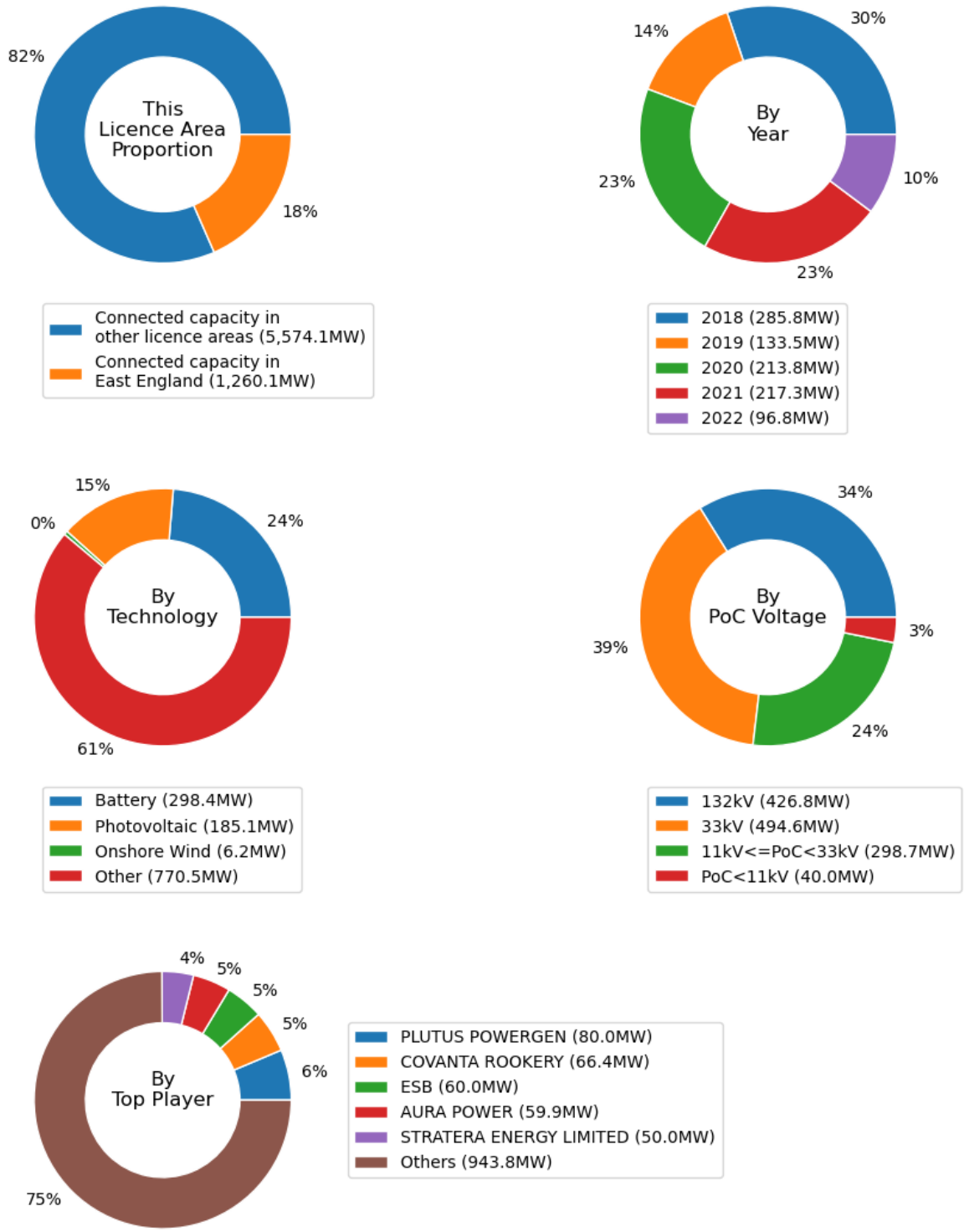


Figure 9-56: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in South East England

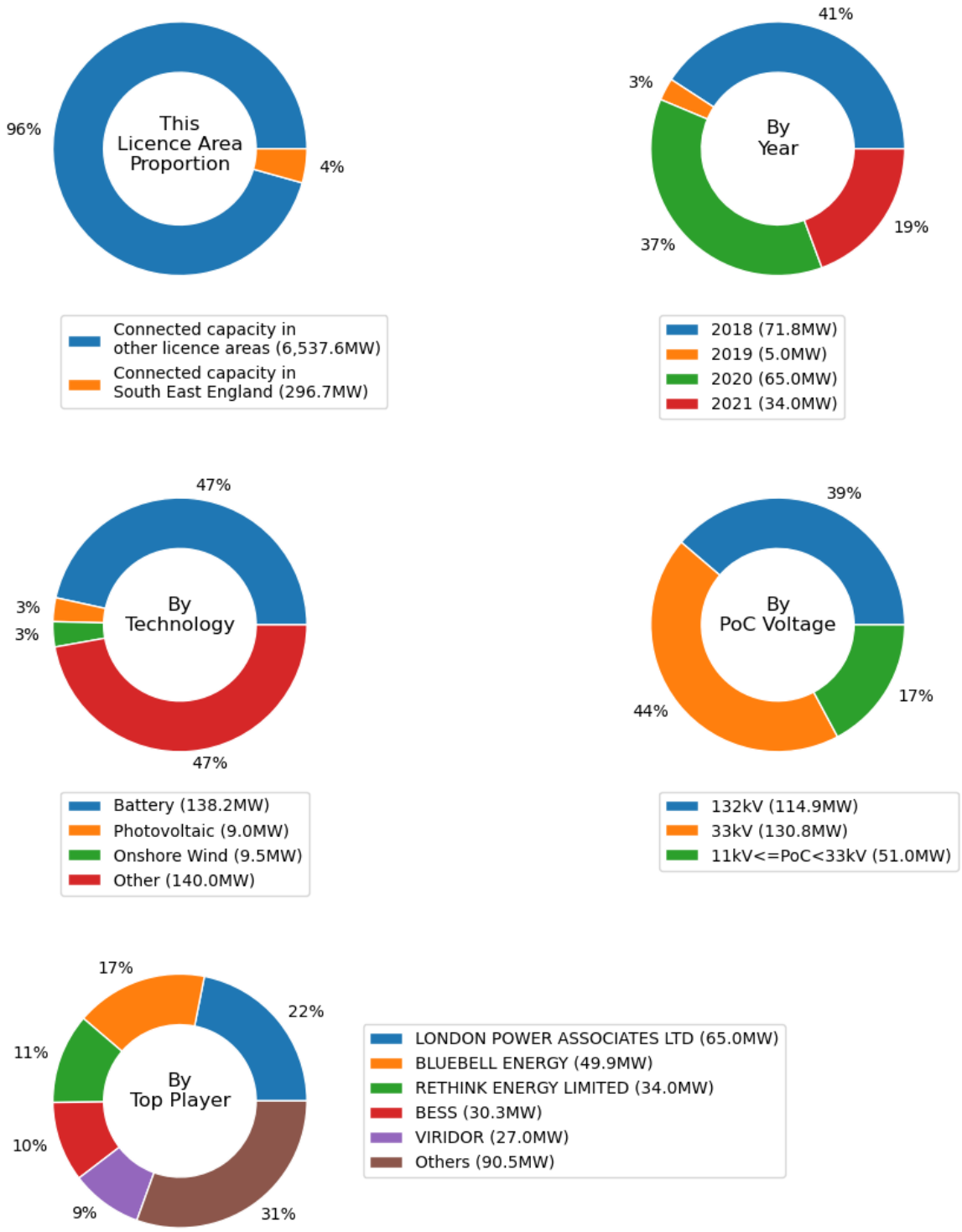


Figure 9-57: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in North East England

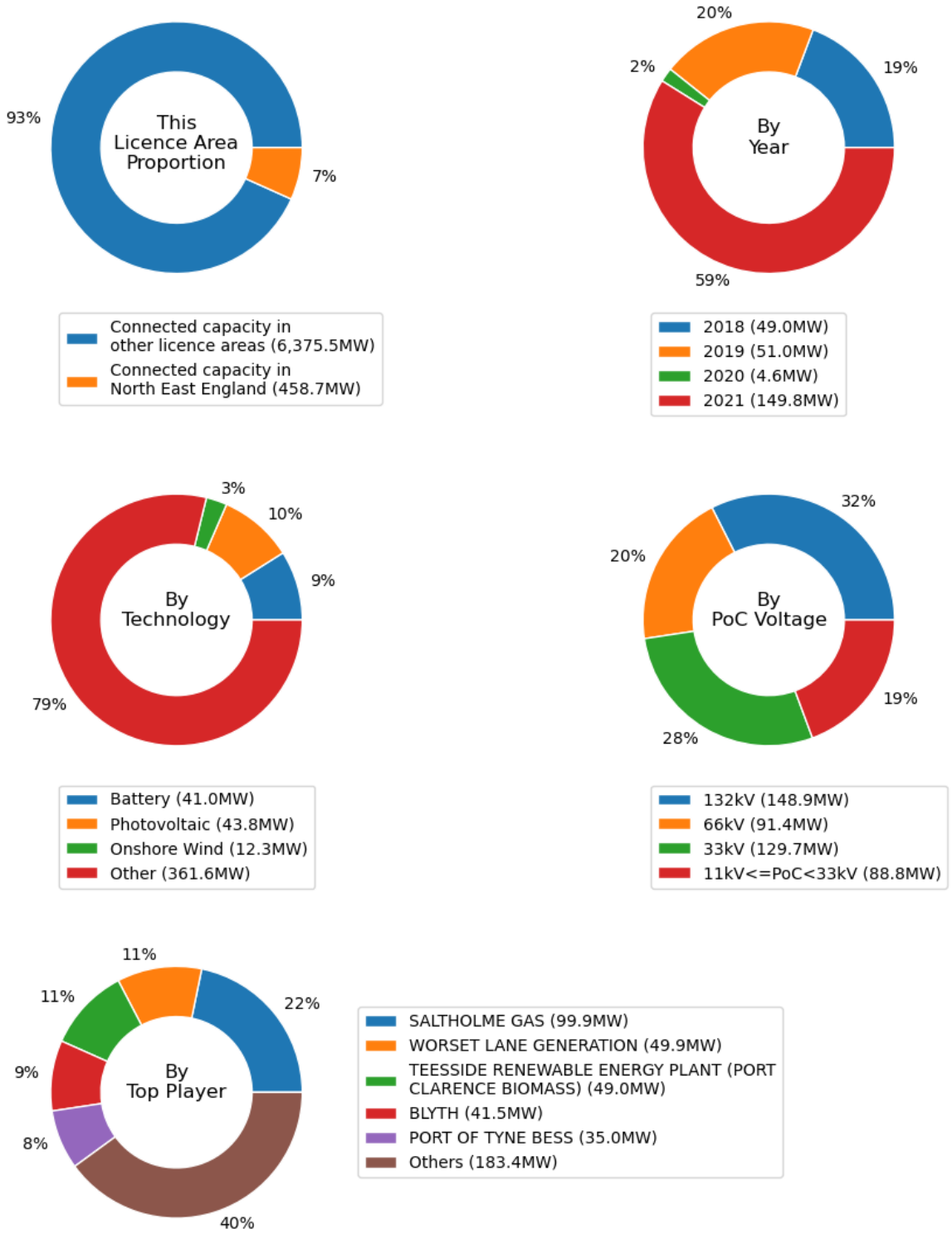


Figure 9-58: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in Yorkshire

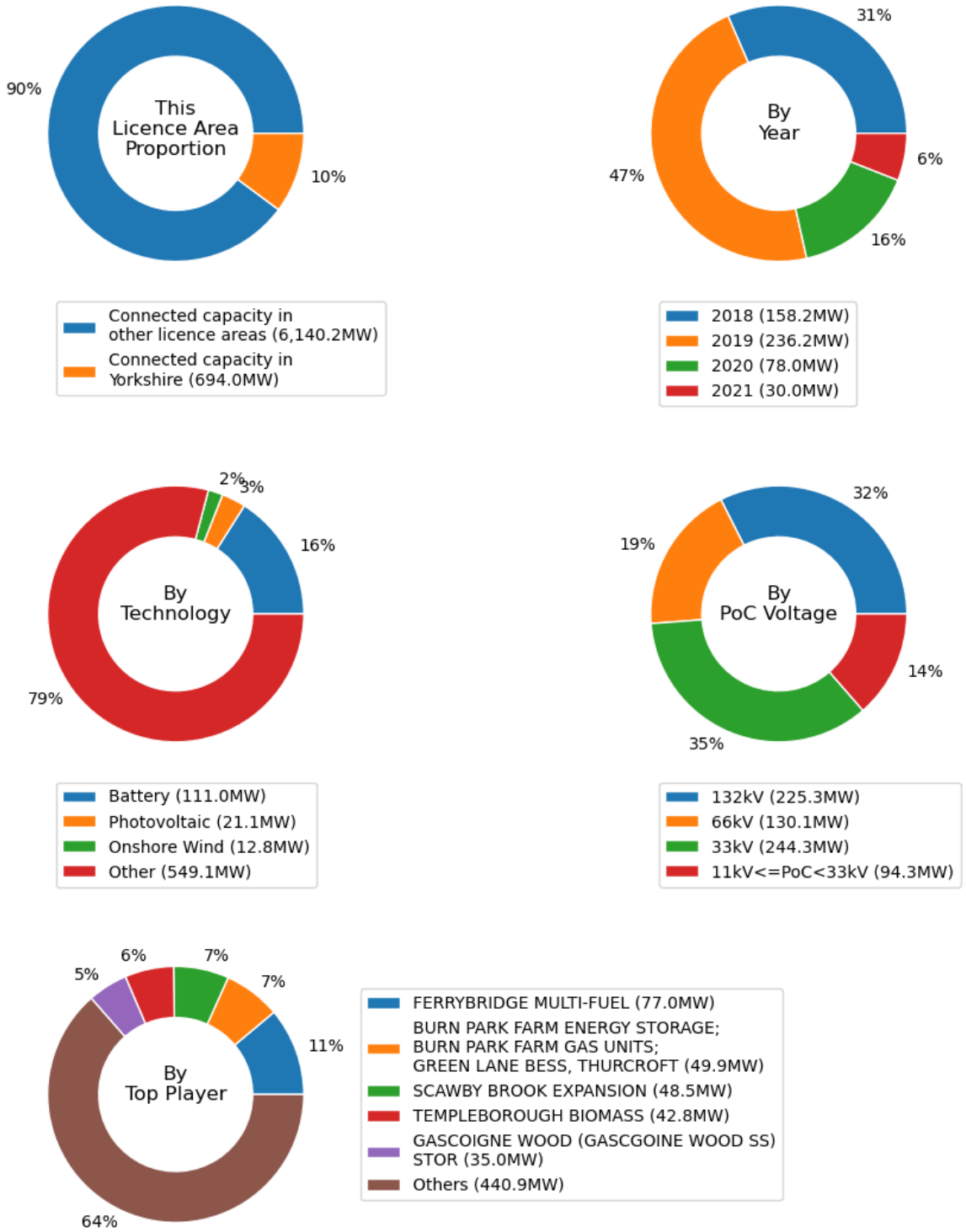


Figure 9-59: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in North West England

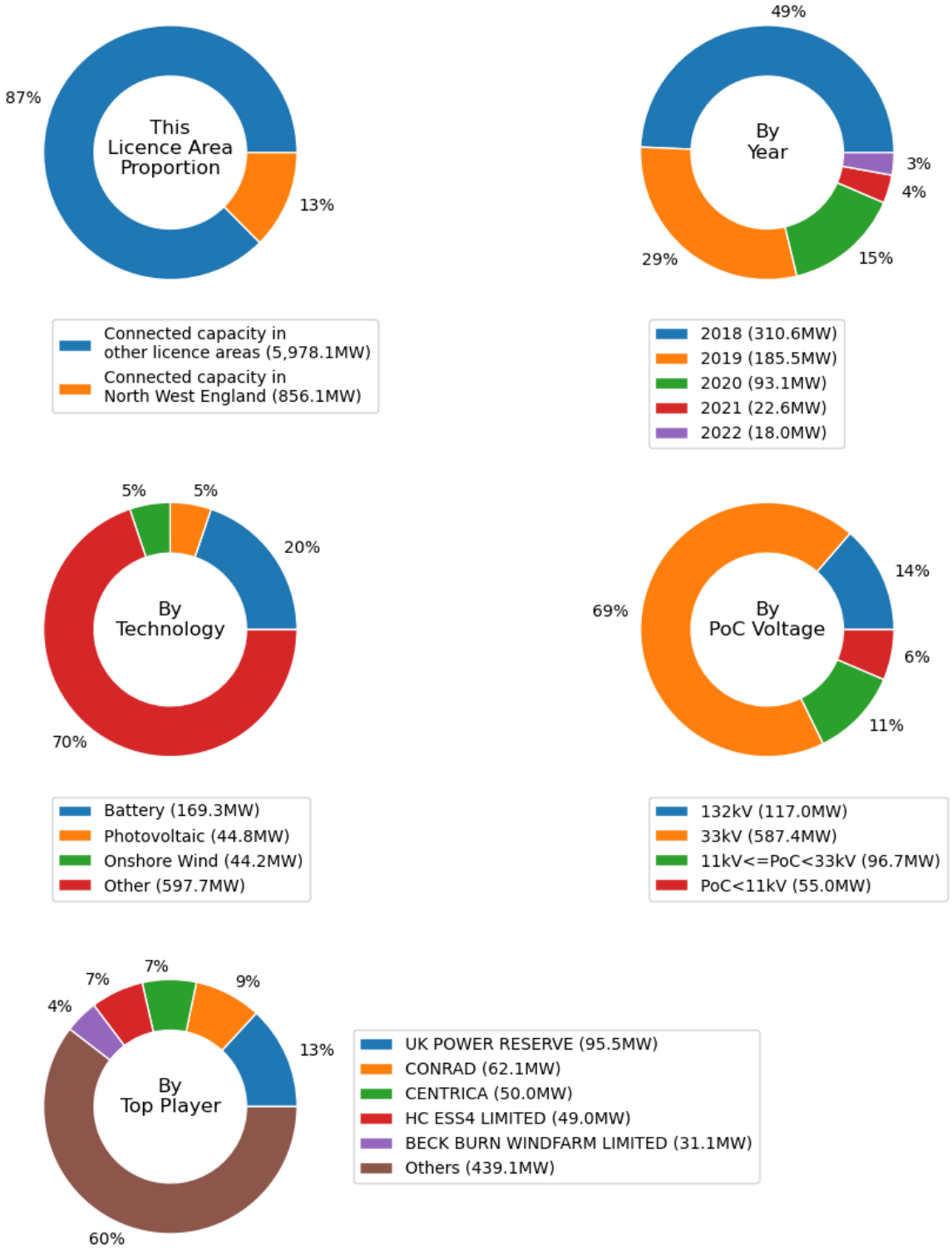


Figure 9-60: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in North Wales, Merseyside and Cheshire

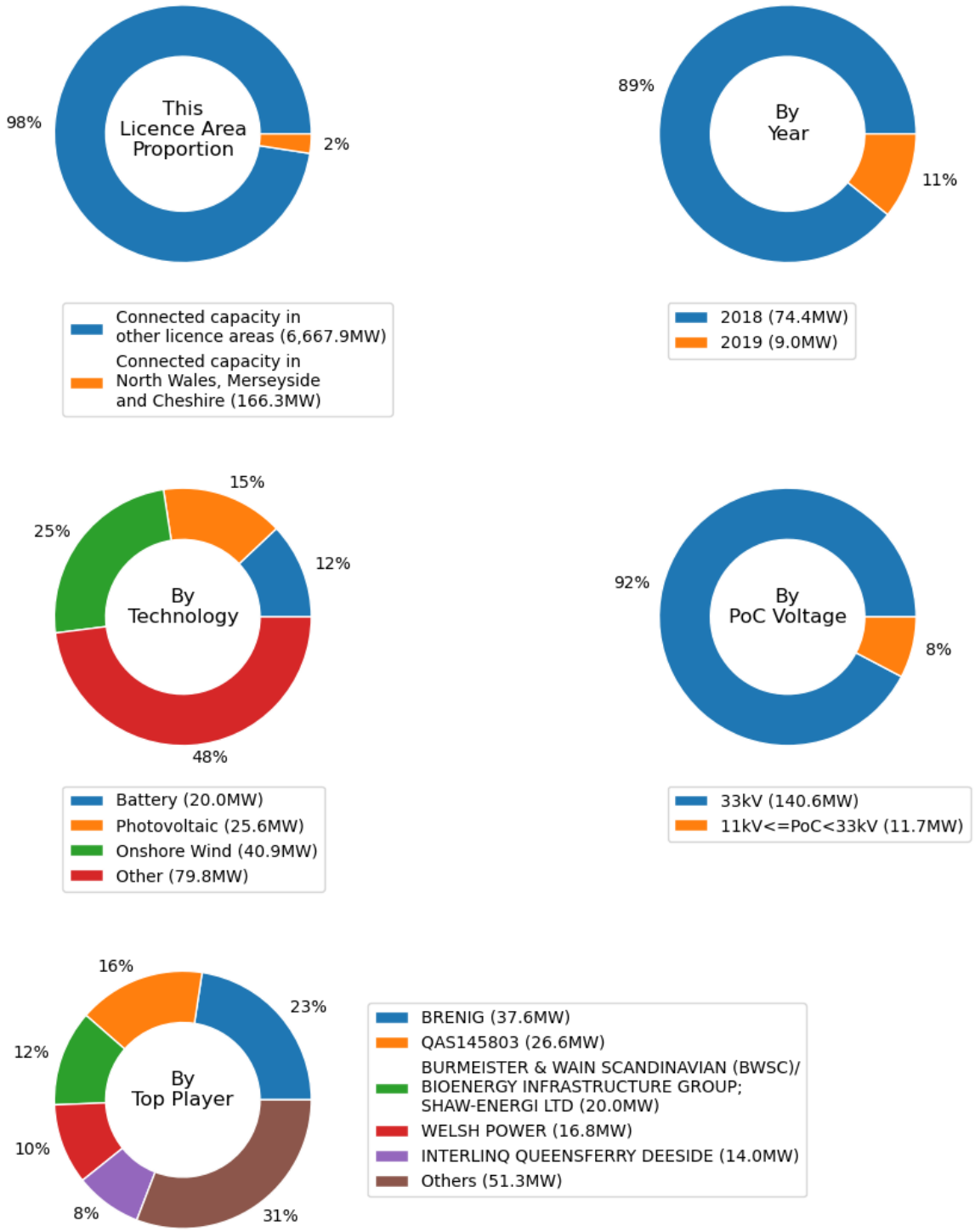
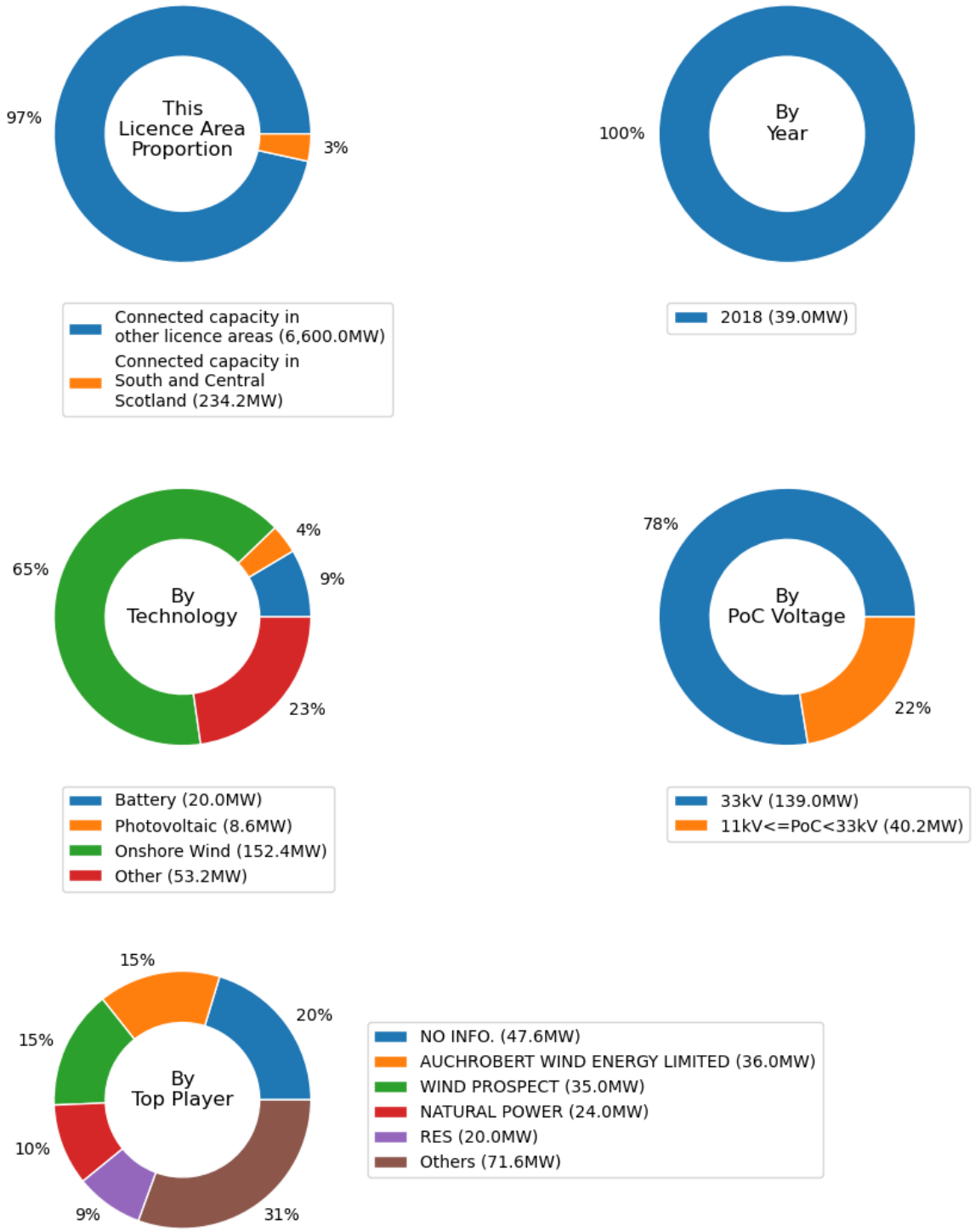


Figure 9-61: Connected Offers (2018-2022) by Year, Technology, Voltage and Top Players in South and Central Scotland



Appendix N: Technology by Year for Connected Offers (2018-2022) at Individual Licence Area Level

Figure 9-62: Technology by Year for Connected Offers (2018-2022) in East Midlands

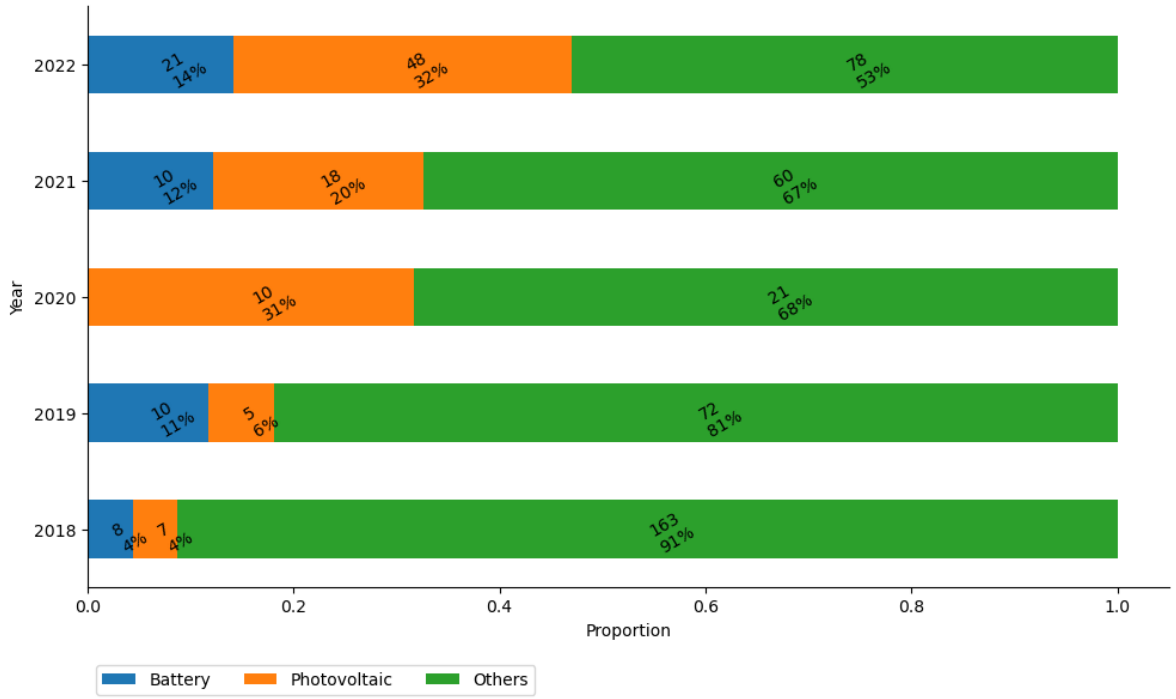


Figure 9-63: Technology by Year for Connected Offers (2018-2022) in South Wales

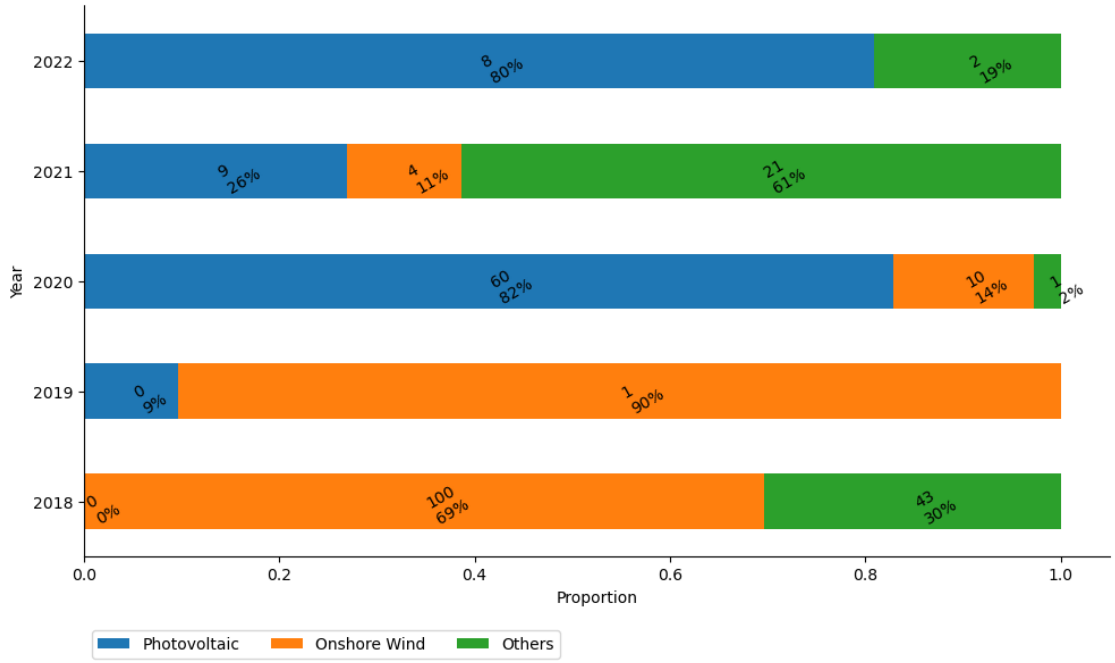


Figure 9-64: Technology by Year for Connected Offers (2018-2022) in South West England

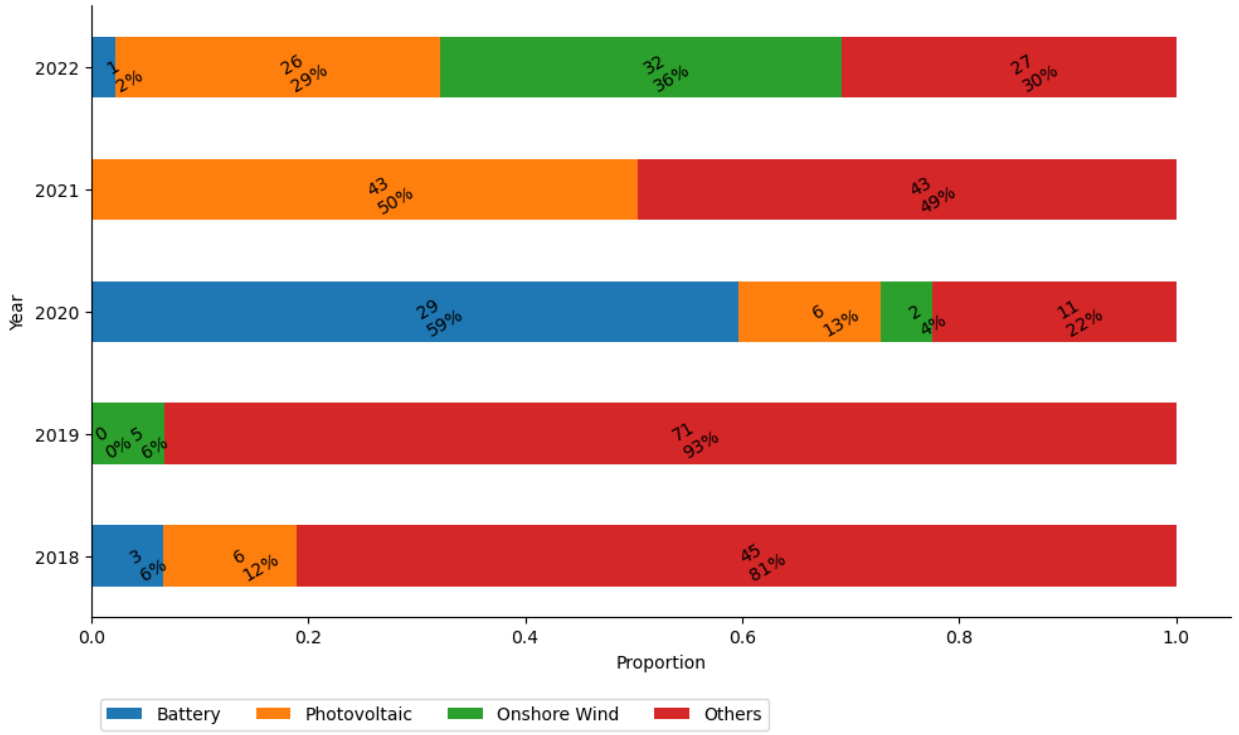


Figure 9-65: Technology by Year for Connected Offers (2018-2022) in West Midlands

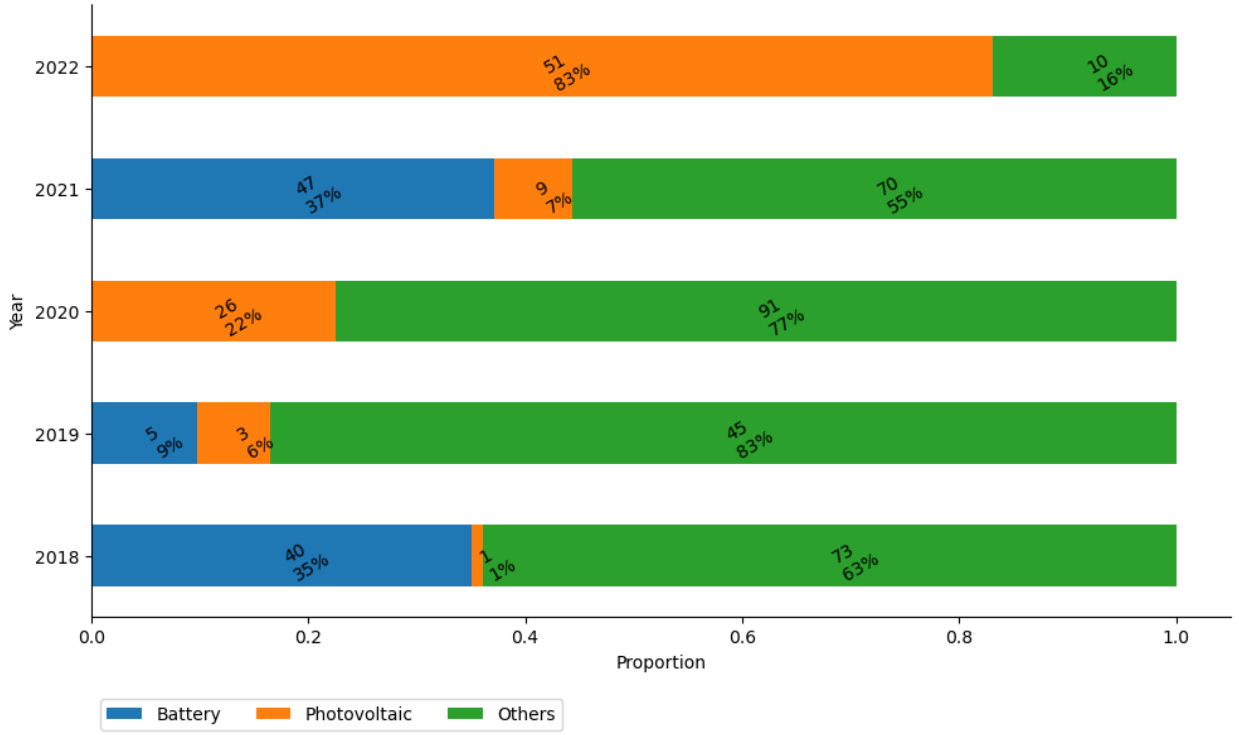


Figure 9-66: Technology by Year for Connected Offers (2018-2022) in East England

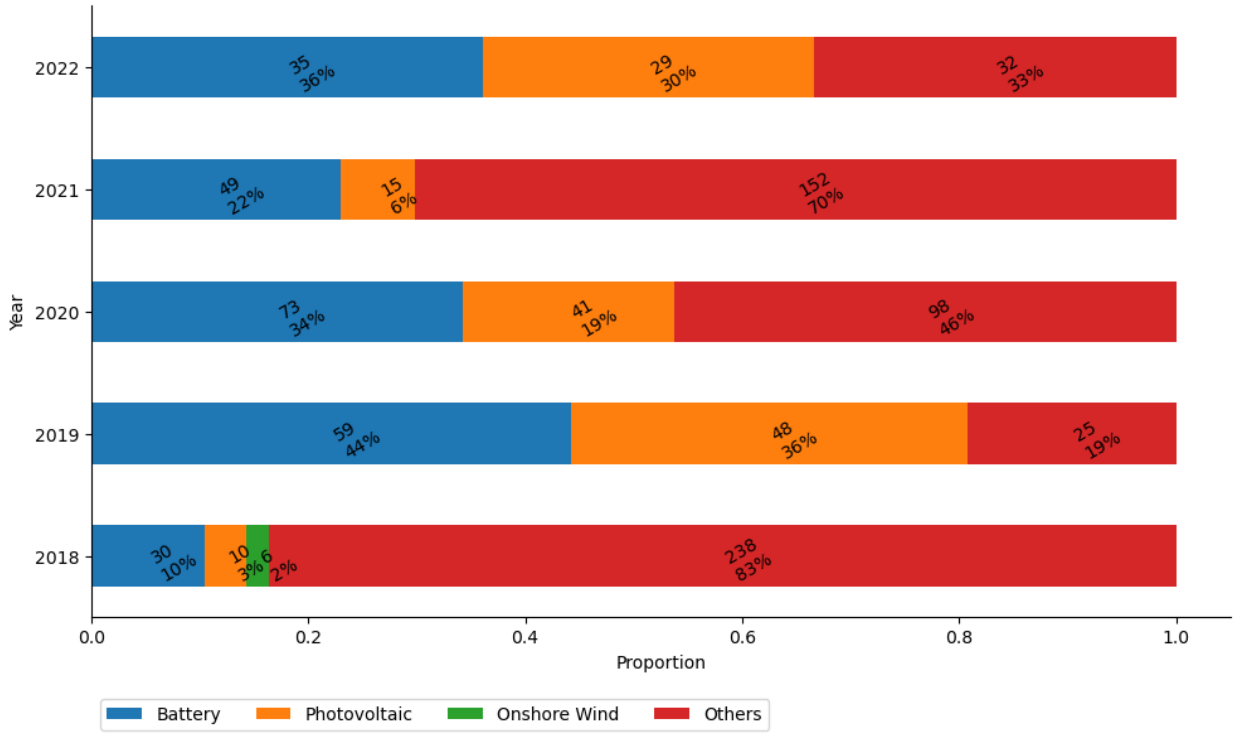


Figure 9-67: Technology by Year for Connected Offers (2018-2022) in South East England

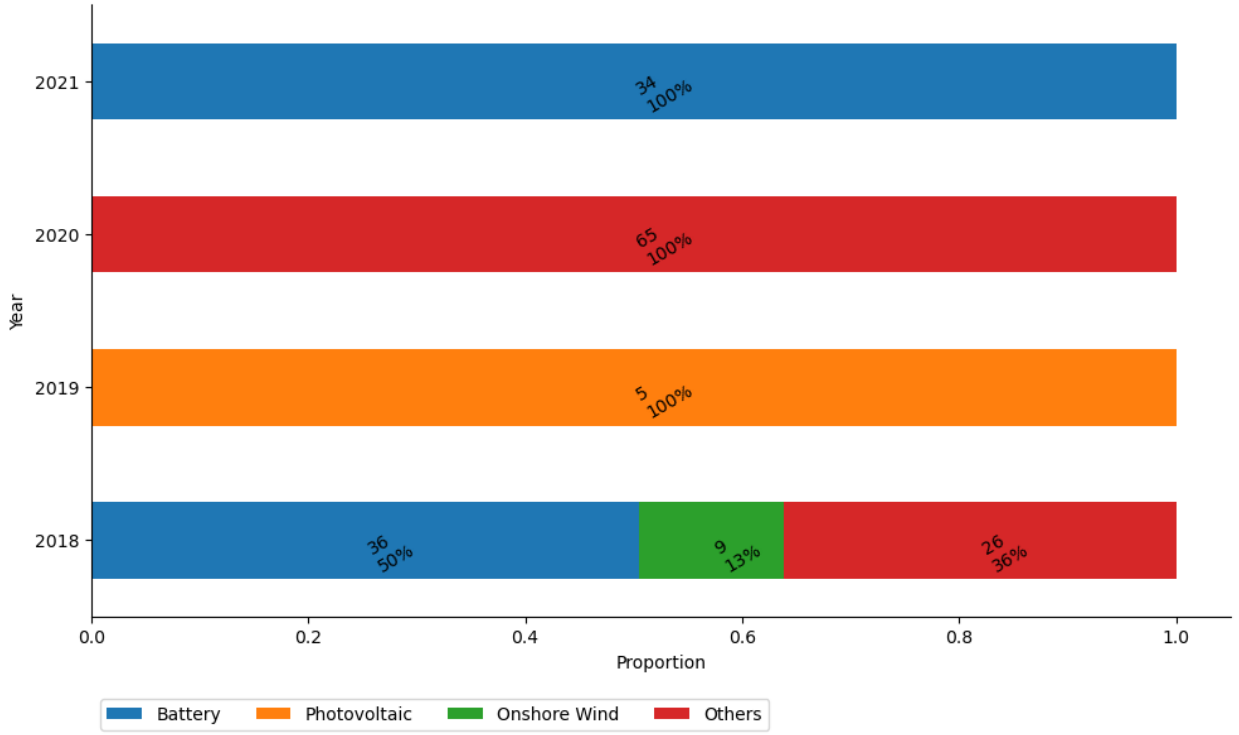


Figure 9-68: Technology by Year for Connected Offers (2018-2022) in North East England

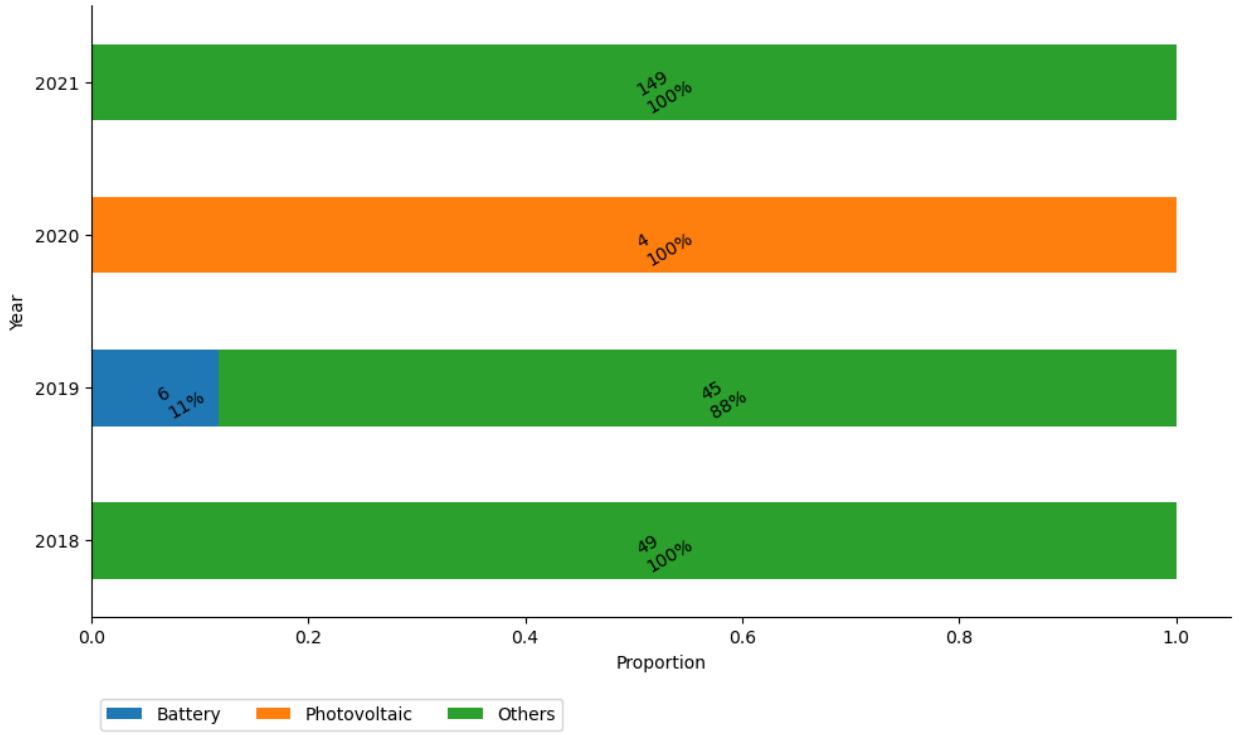


Figure 9-69: Technology by Year for Connected Offers (2018-2022) in Yorkshire

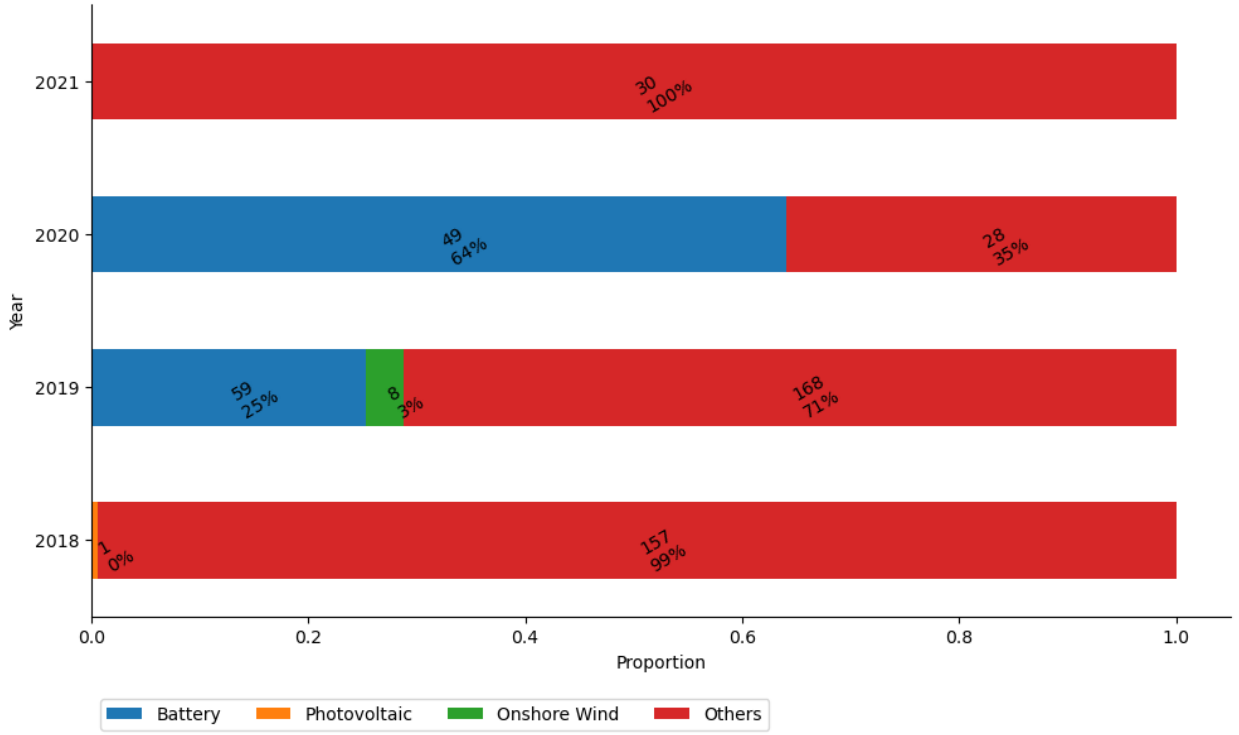
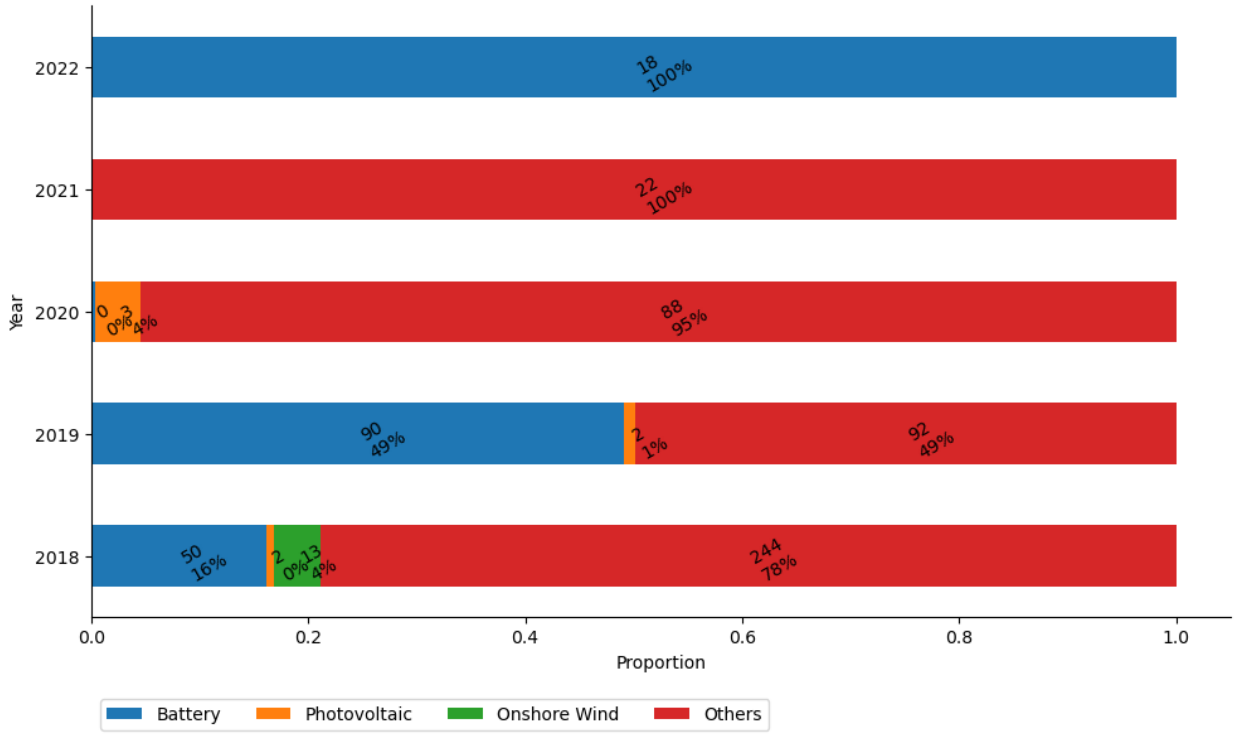


Figure 9-70: Technology by Year for Connected Offers (2018-2022) in North West England



Appendix O: PoC Voltage by Technology for Connected Offers (2018-2022) at Individual Licence Area Level

Figure 9-71: PoC Voltage by Technology for Connected Offers (2018-2022) in East Midlands

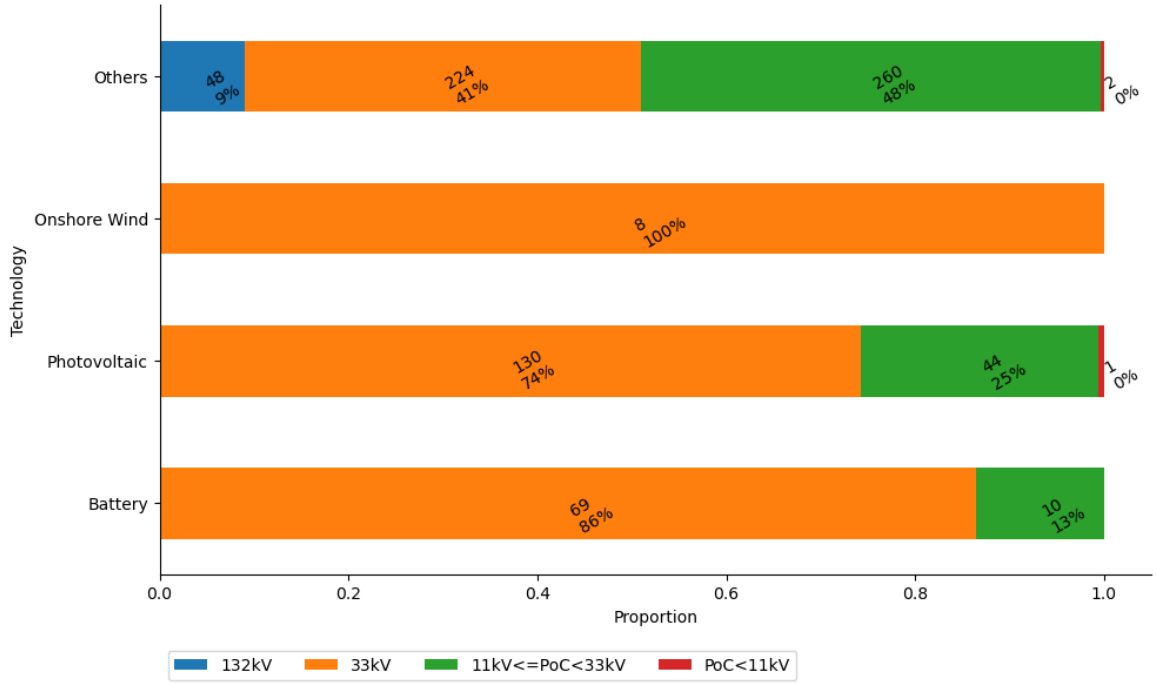


Figure 9-72: PoC Voltage by Technology for Connected Offers (2018-2022) in South Wales

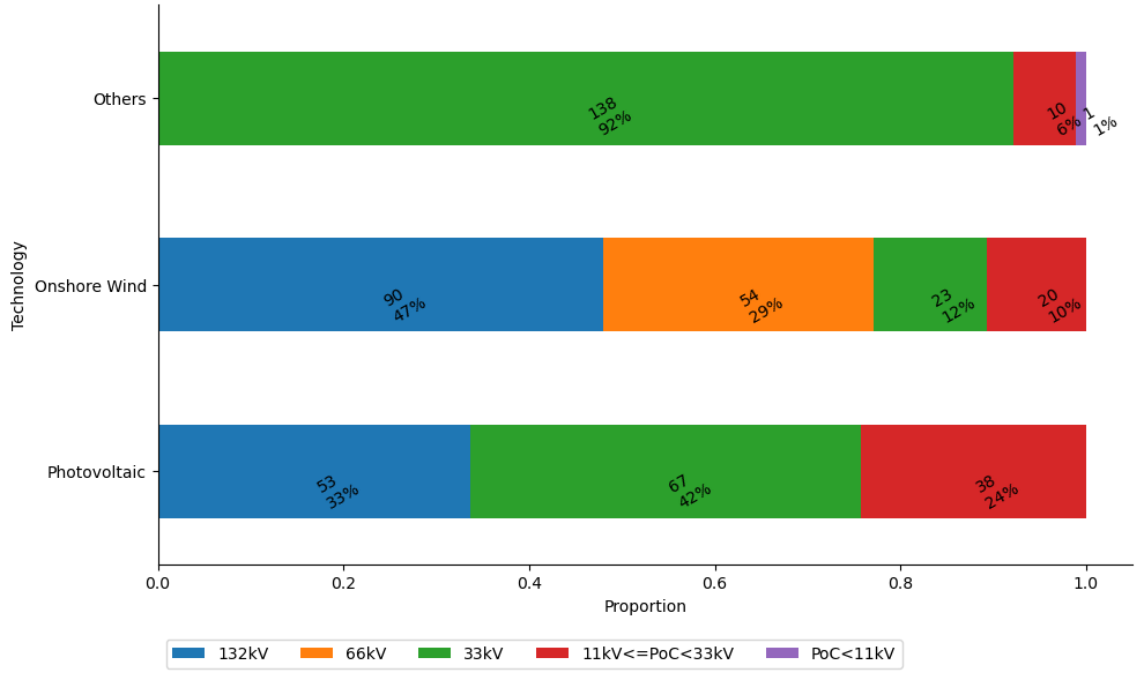


Figure 9-73: PoC Voltage by Technology for Connected Offers (2018-2022) in South West England

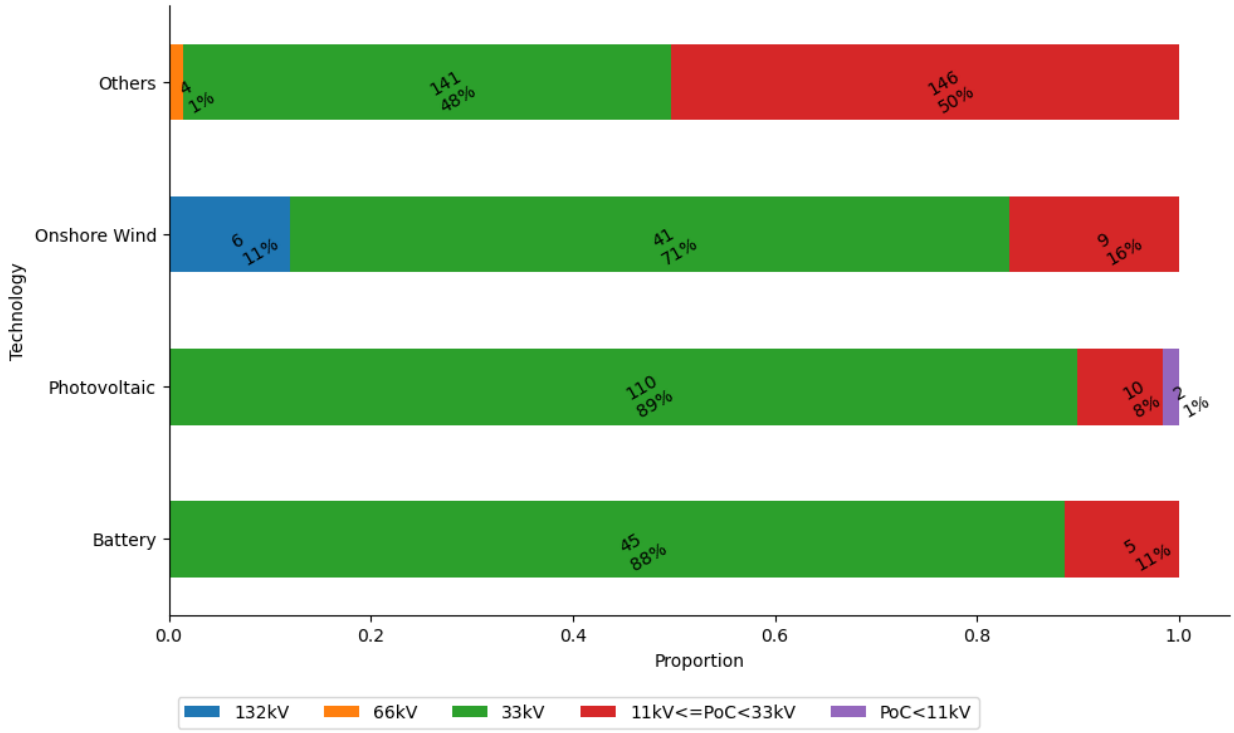


Figure 9-74: PoC Voltage by Technology for Connected Offers (2018-2022) in West Midlands

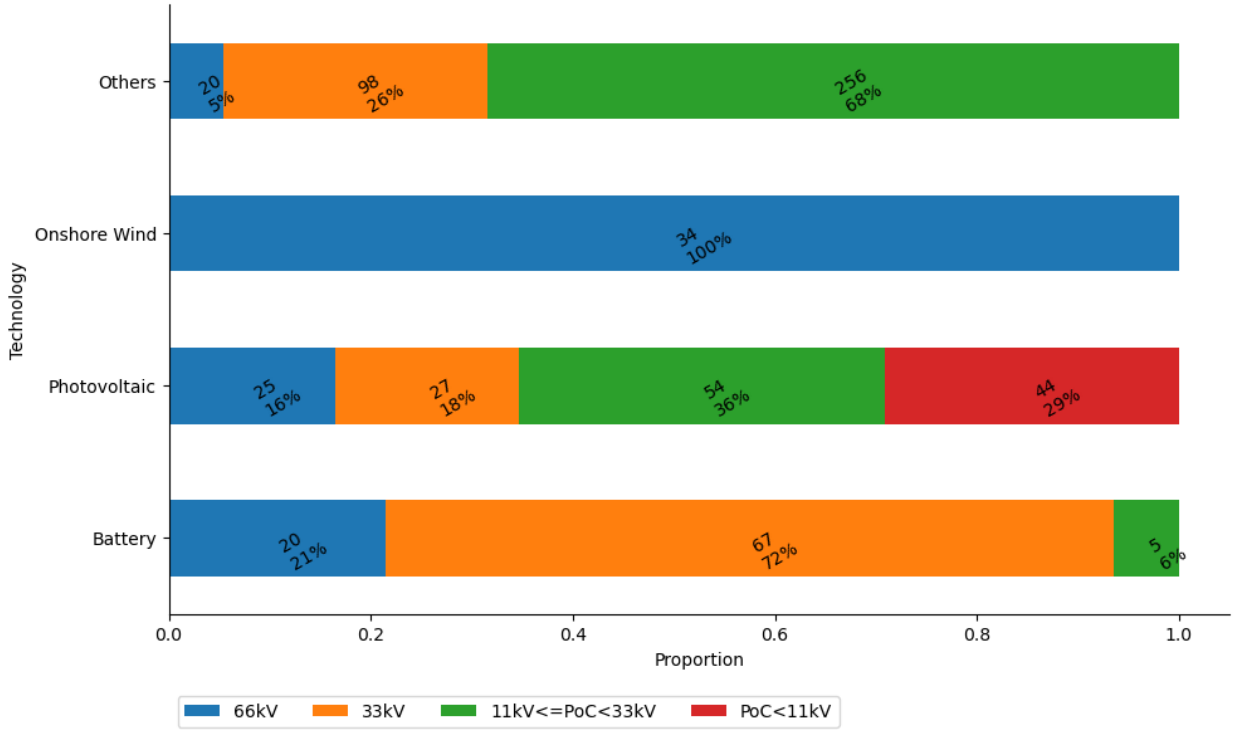


Figure 9-75: PoC Voltage by Technology for Connected Offers (2018-2022) in North Scotland

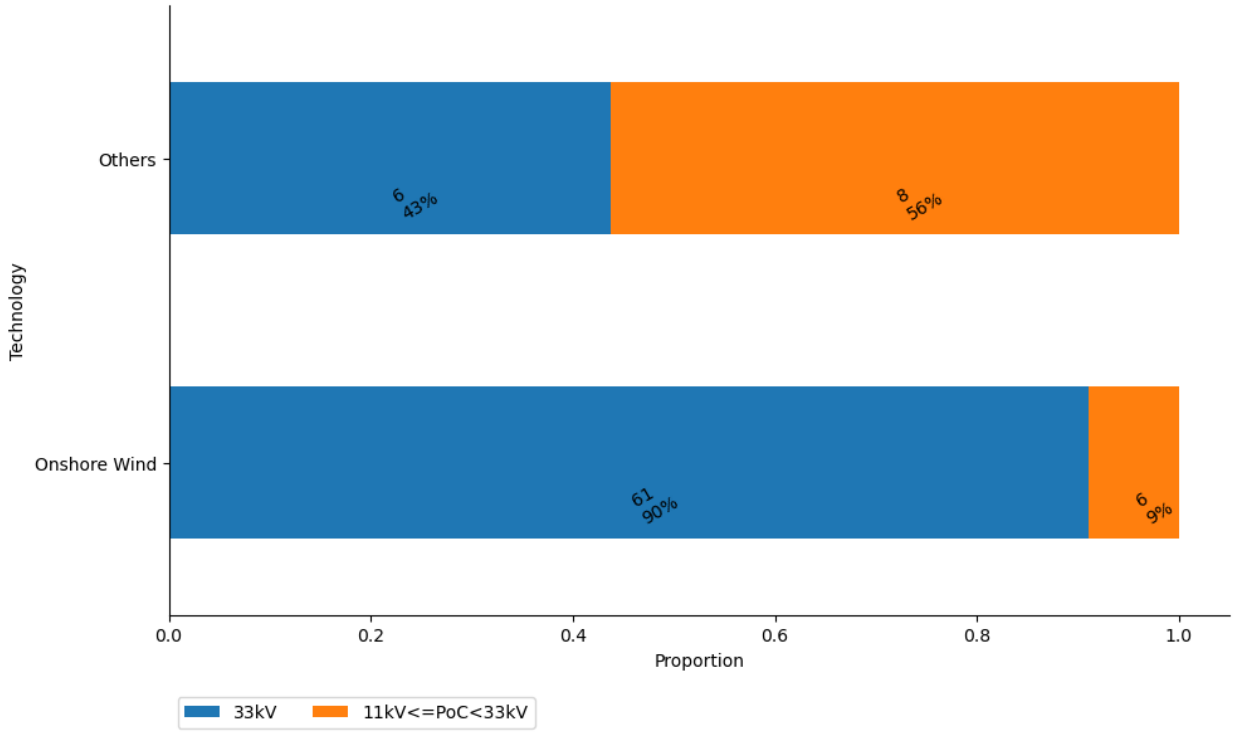


Figure 9-76: PoC Voltage by Technology for Connected Offers (2018-2022) in Southern England

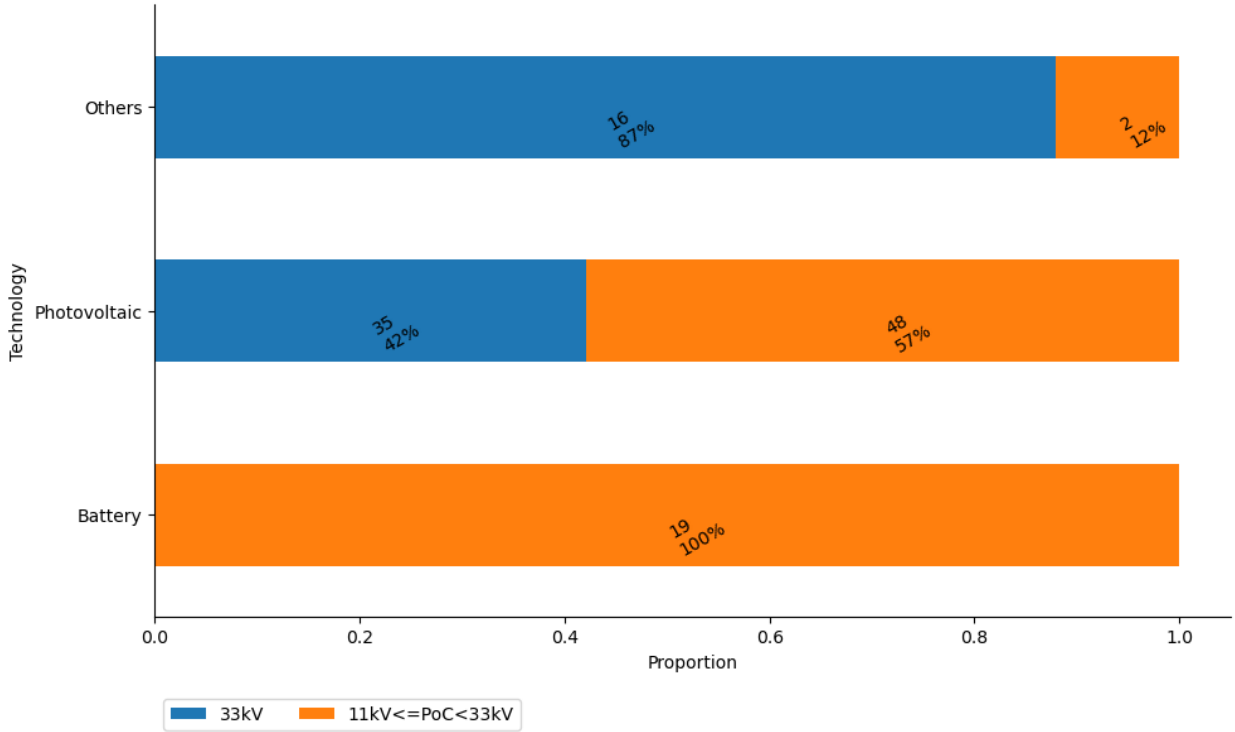


Figure 9-77: PoC Voltage by Technology for Connected Offers (2018-2022) in East England

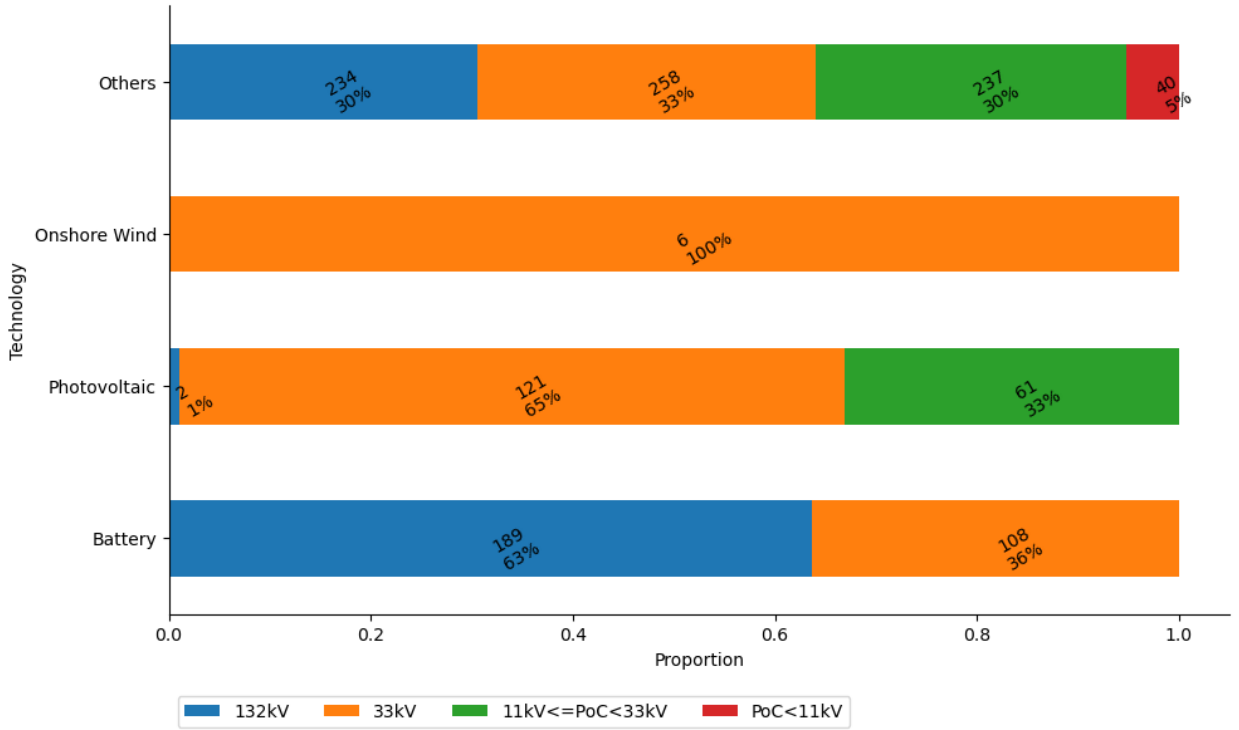


Figure 9-78: PoC Voltage by Technology for Connected Offers (2018-2022) in South East England

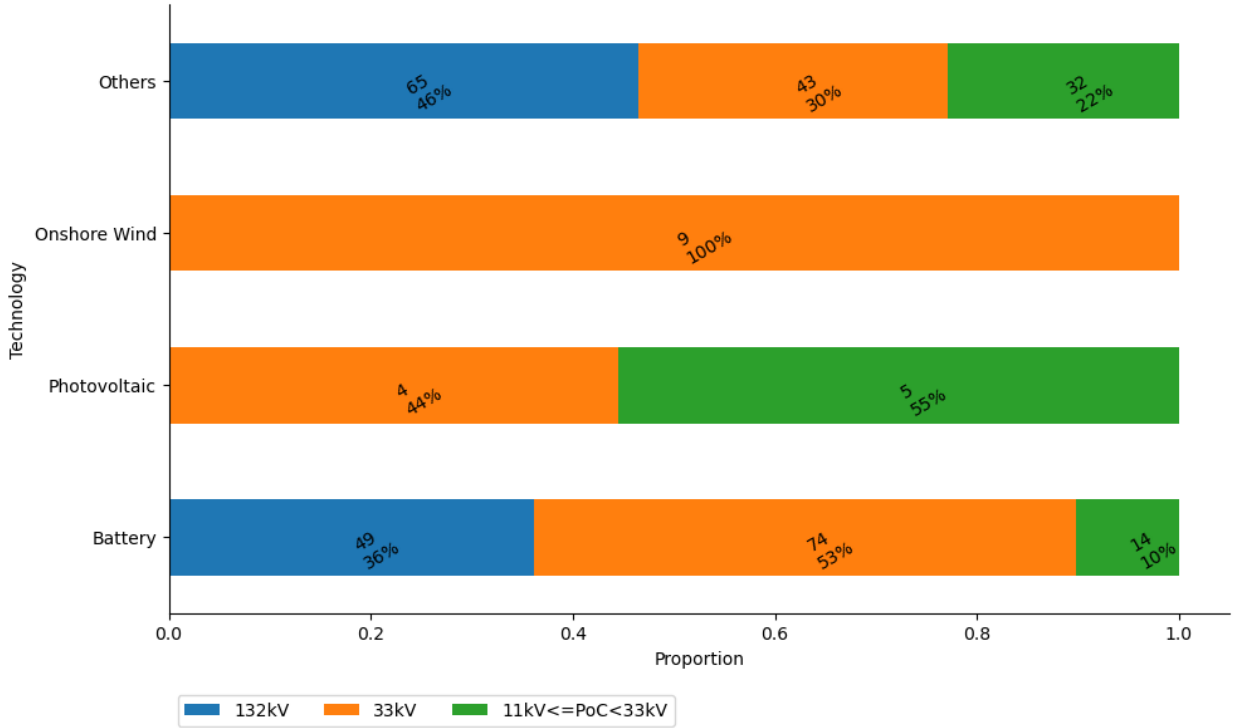


Figure 9-79: PoC Voltage by Technology for Connected Offers (2018-2022) in North East England

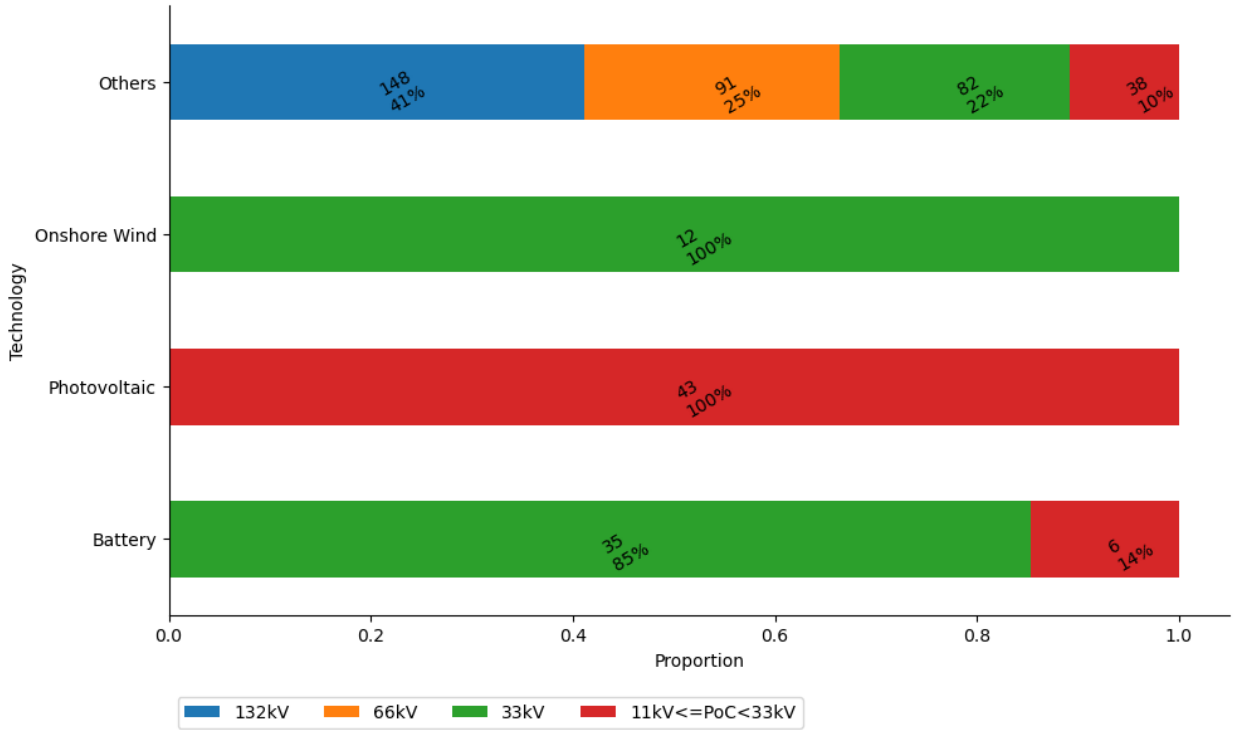


Figure 9-80: PoC Voltage by Technology for Connected Offers (2018-2022) in Yorkshire

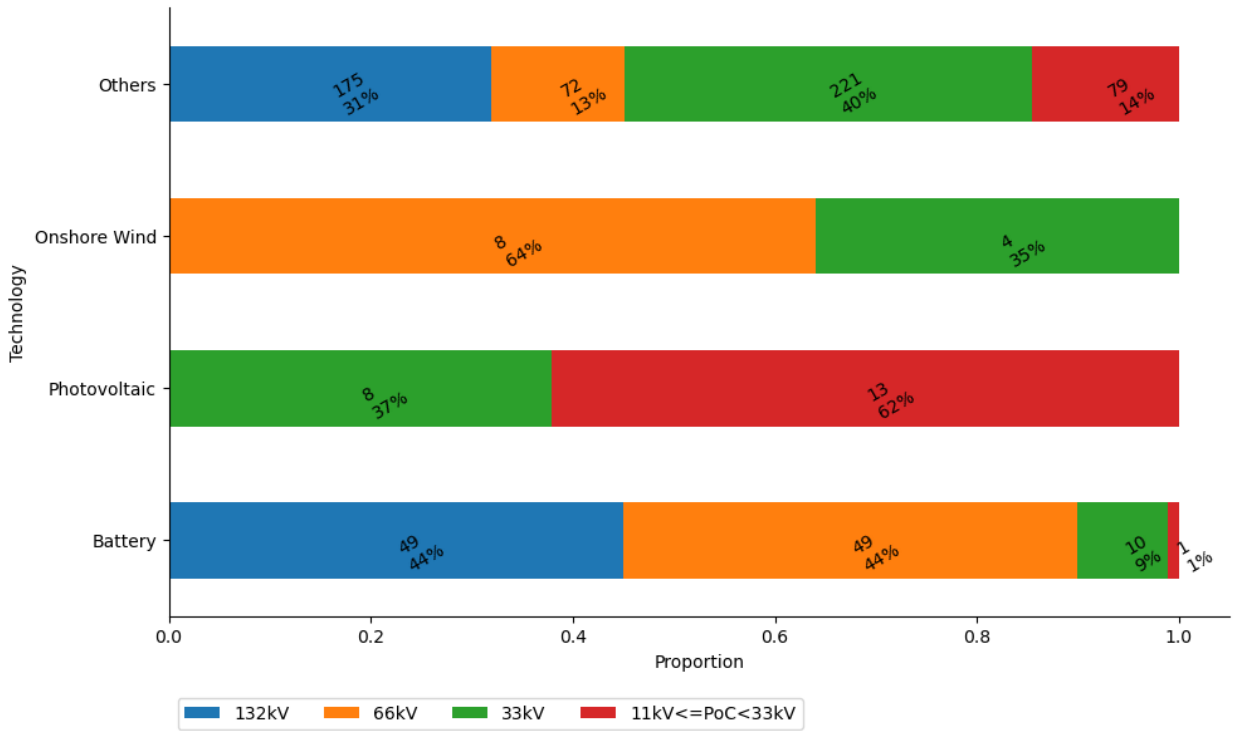


Figure 9-81: PoC Voltage by Technology for Connected Offers (2018-2022) in North Wales, Merseyside and Cheshire

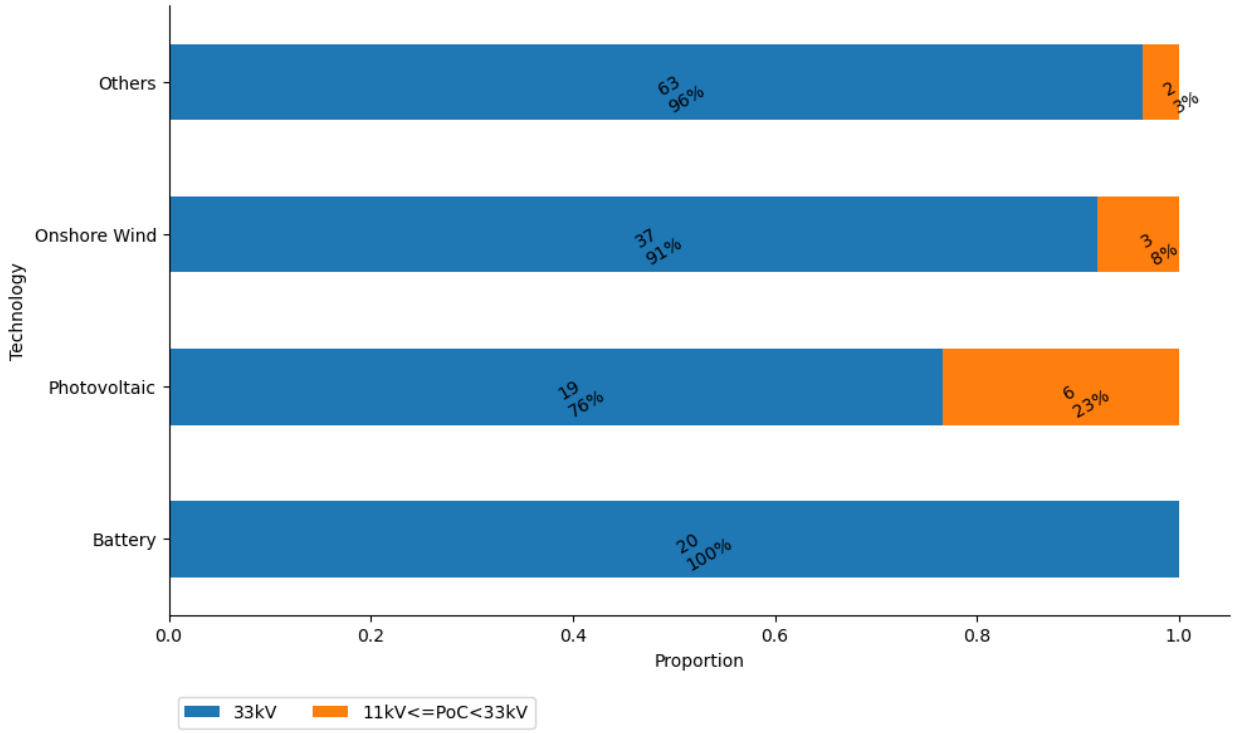


Figure 9-82: PoC Voltage by Technology for Connected Offers (2018-2022) in South and Central Scotland

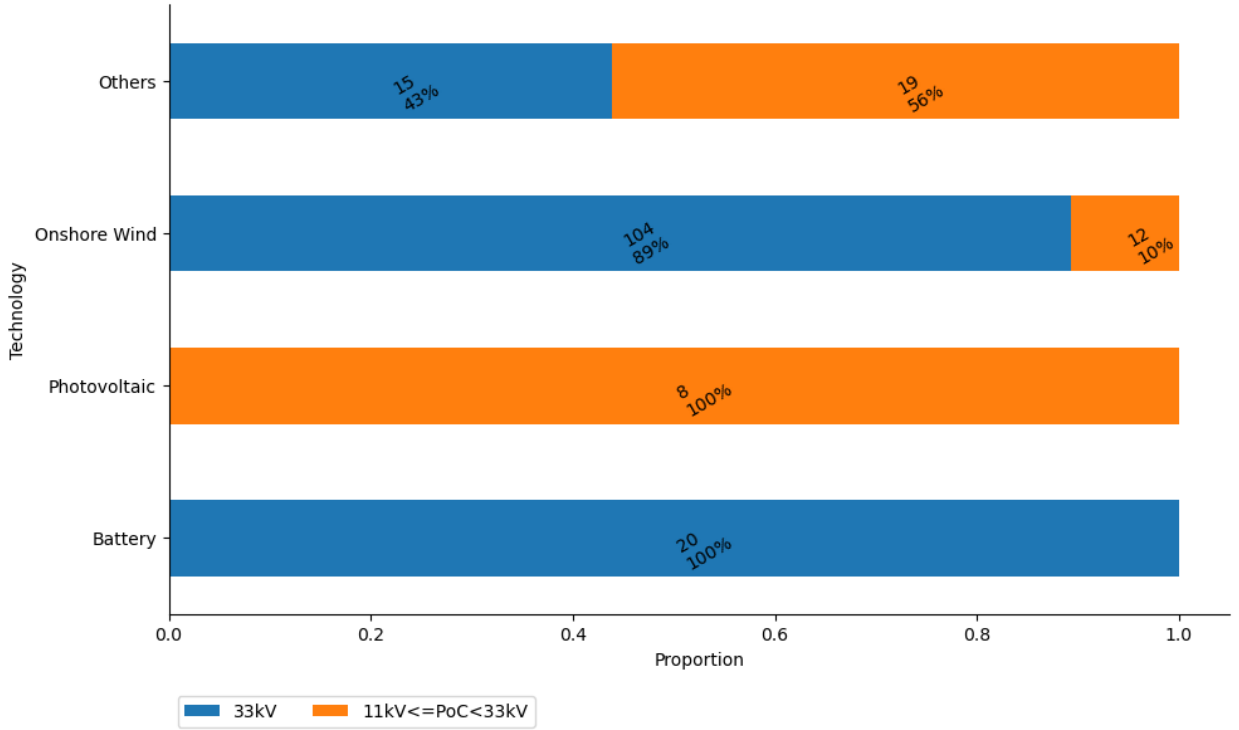
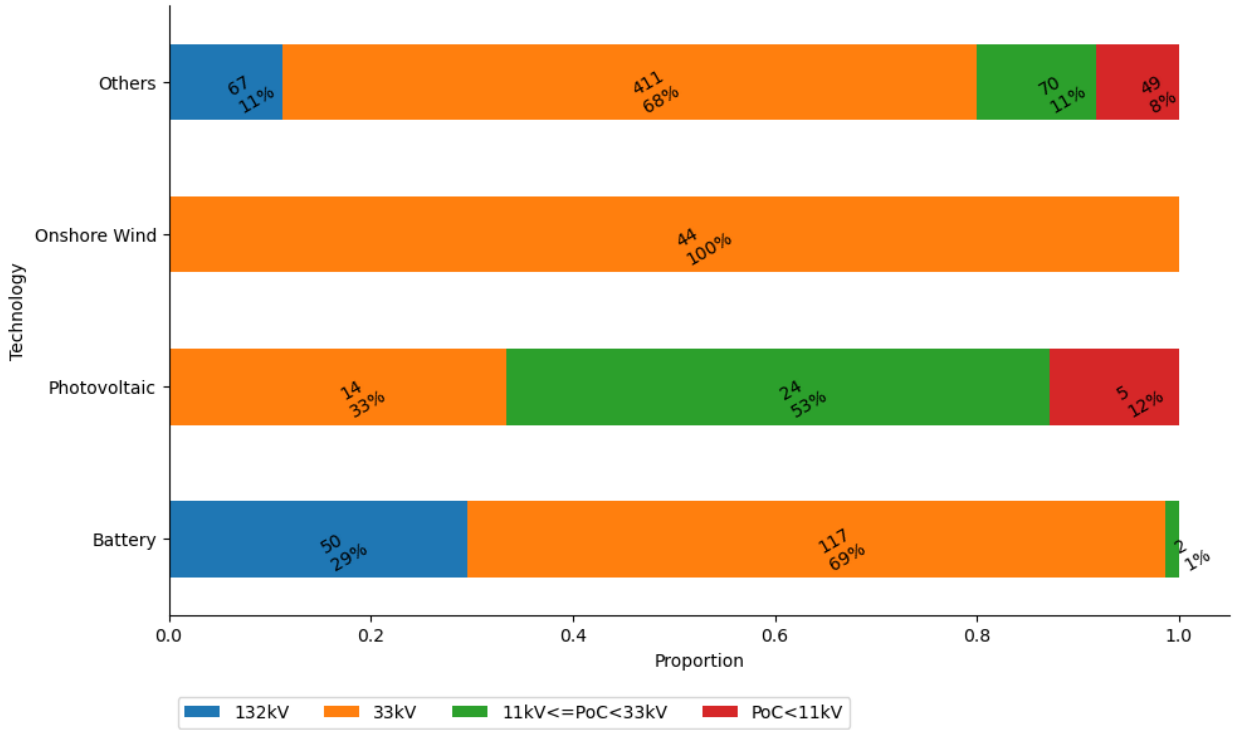


Figure 9-83: PoC Voltage by Technology for Connected Offers (2018-2022) in North West England



Appendix P: PoC Voltage by Year for Connected Offers (2018-2022) at Individual Licence Area Level

Figure 9-84: PoC Voltage by Year for Connected Offers (2018-2022) in East Midlands

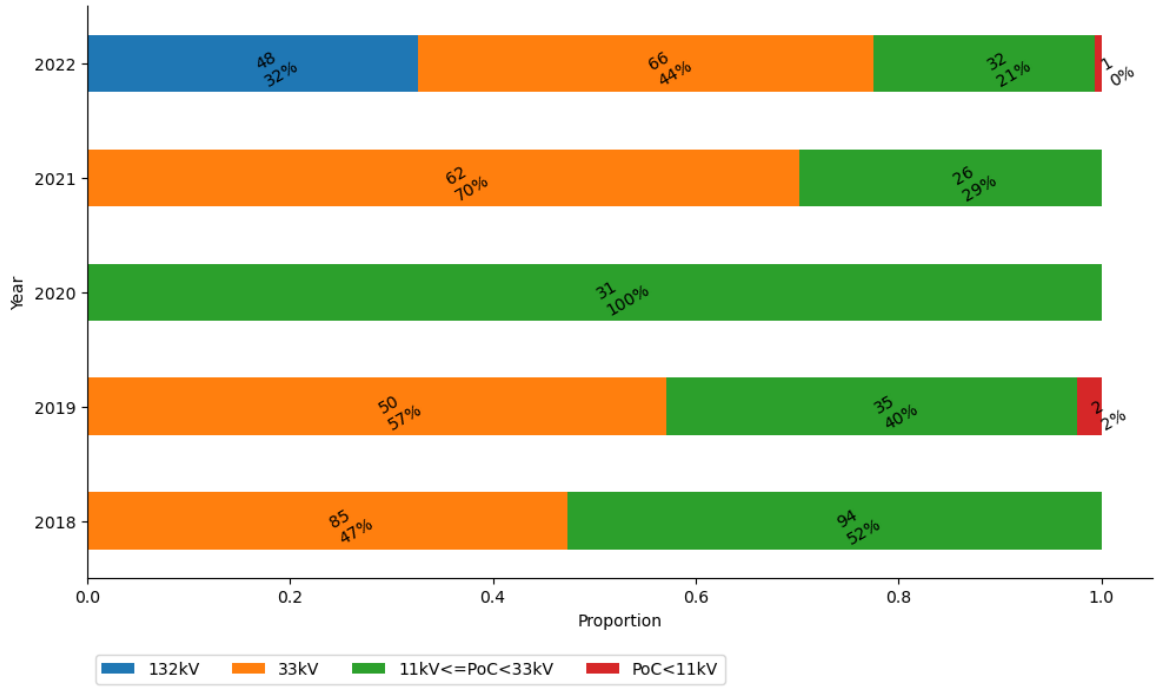


Figure 9-85: PoC Voltage by Year for Connected Offers (2018-2022) in South Wales

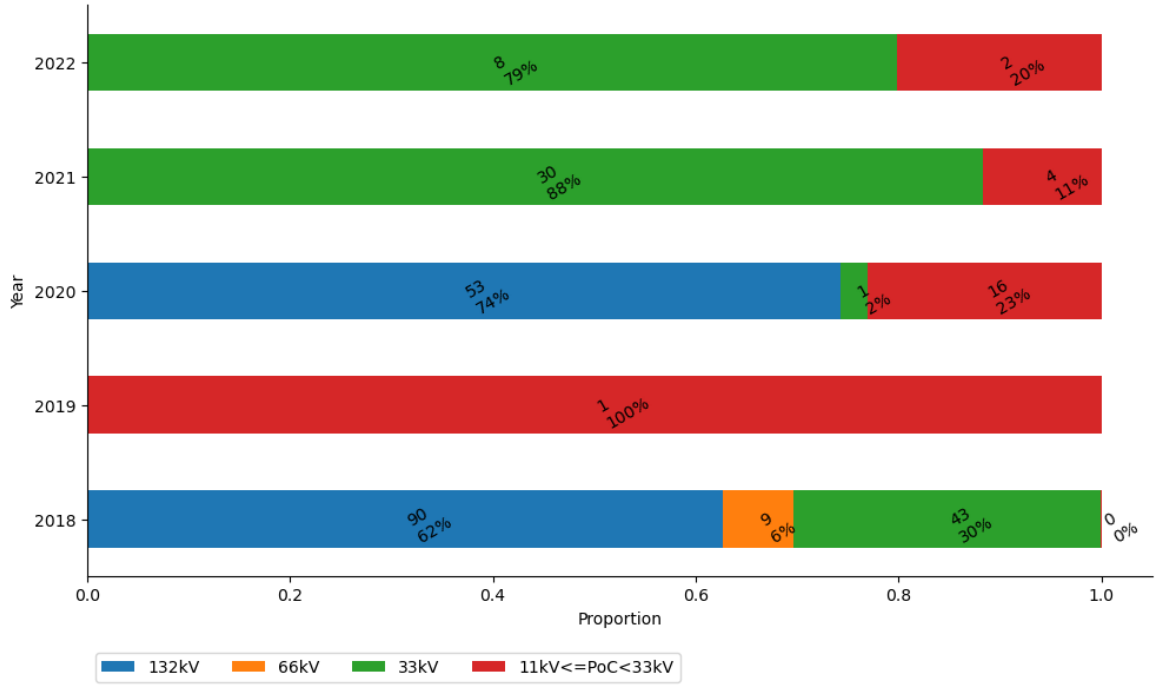


Figure 9-86: PoC Voltage by Year for Connected Offers (2018-2022) in South West England

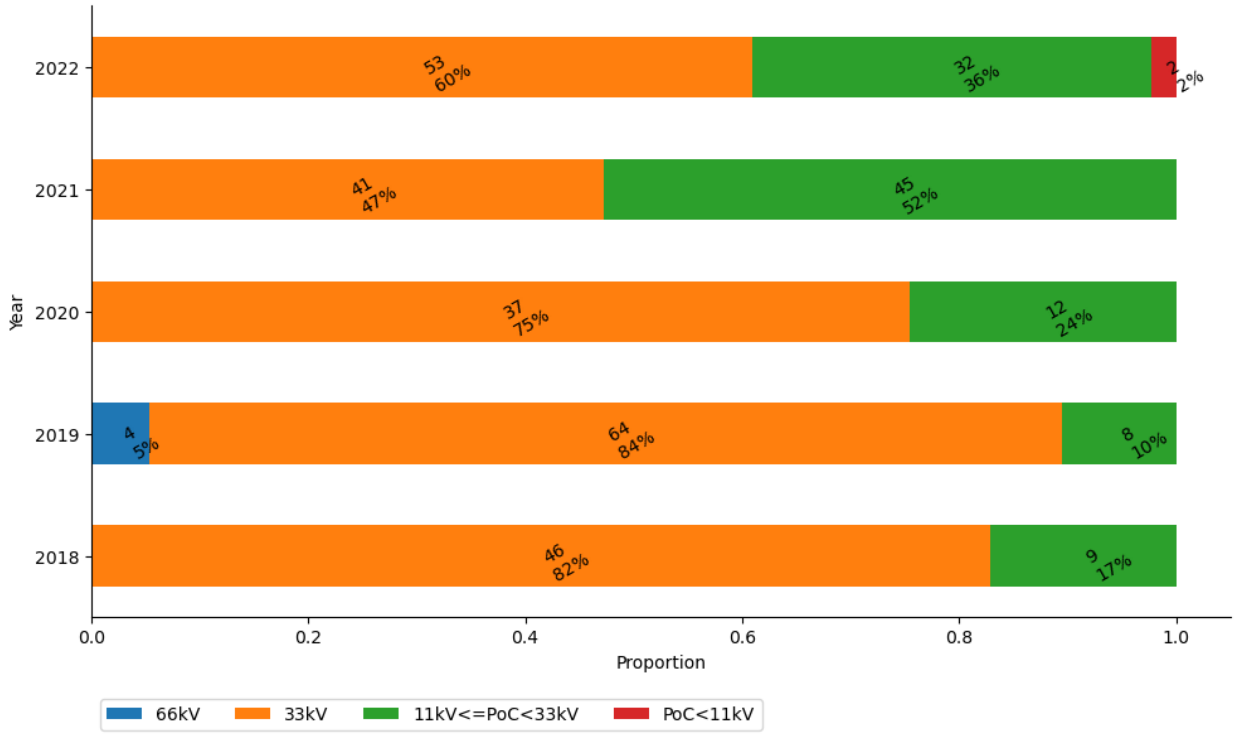


Figure 9-87: PoC Voltage by Year for Connected Offers (2018-2022) in West Midlands

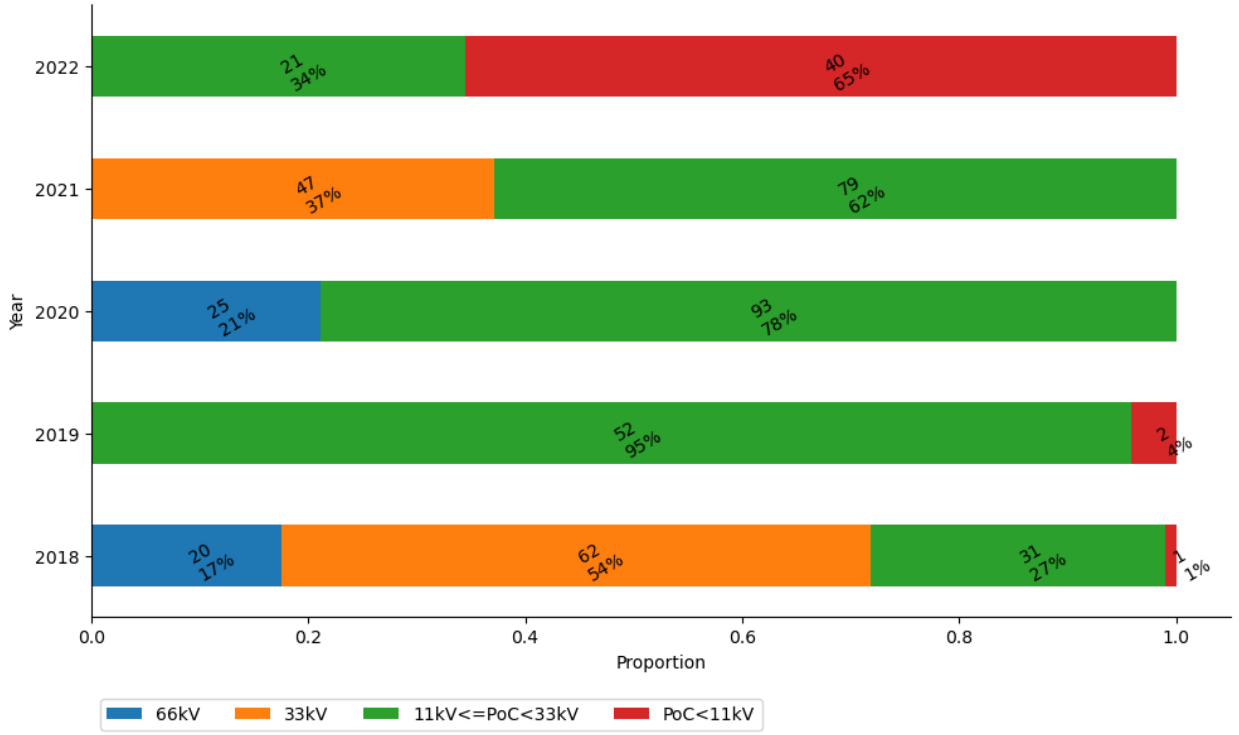


Figure 9-88: PoC Voltage by Year for Connected Offers (2018-2022) in East England

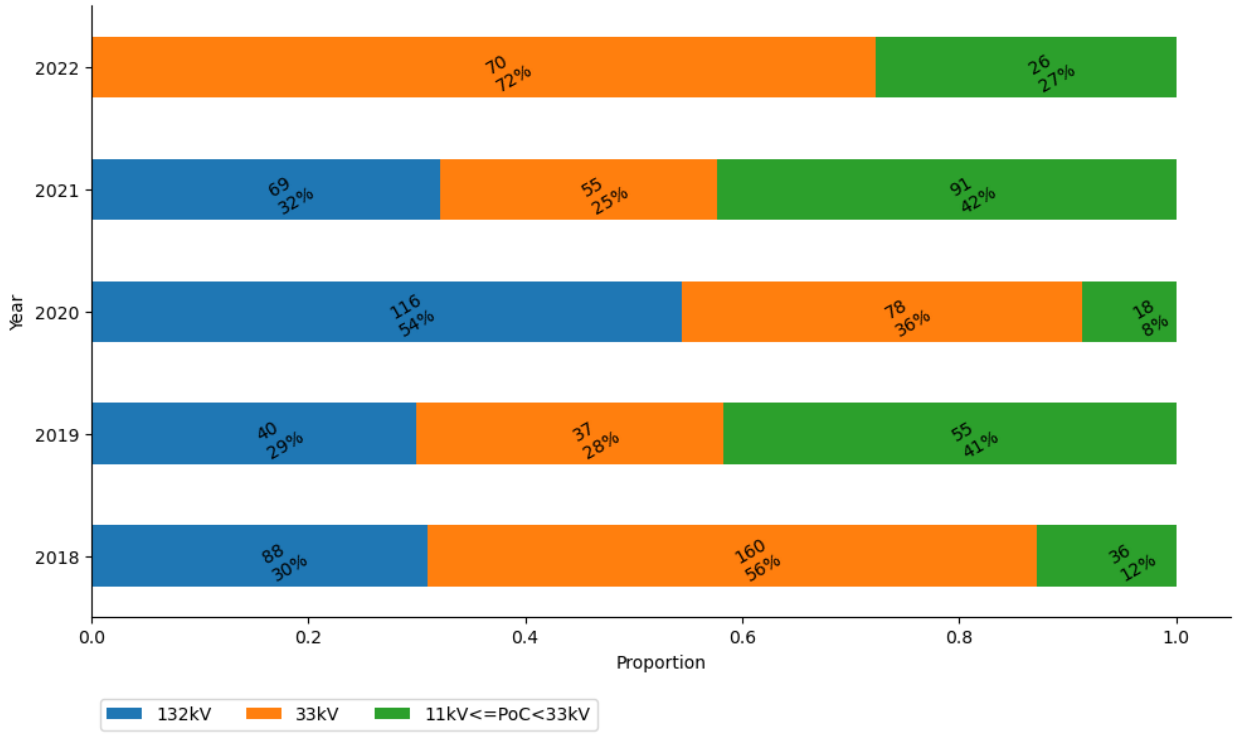


Figure 9-89: PoC Voltage by Year for Connected Offers (2018-2022) in South East England

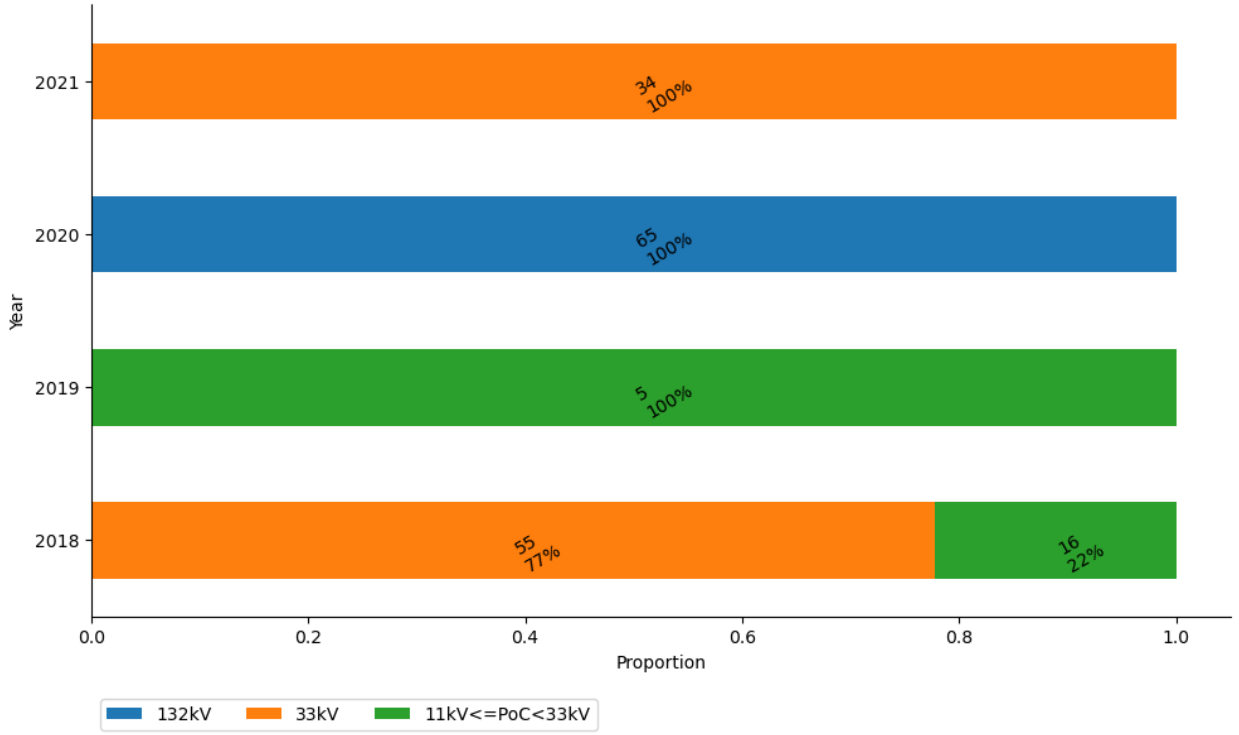


Figure 9-90: PoC Voltage by Year for Connected Offers (2018-2022) in North East England

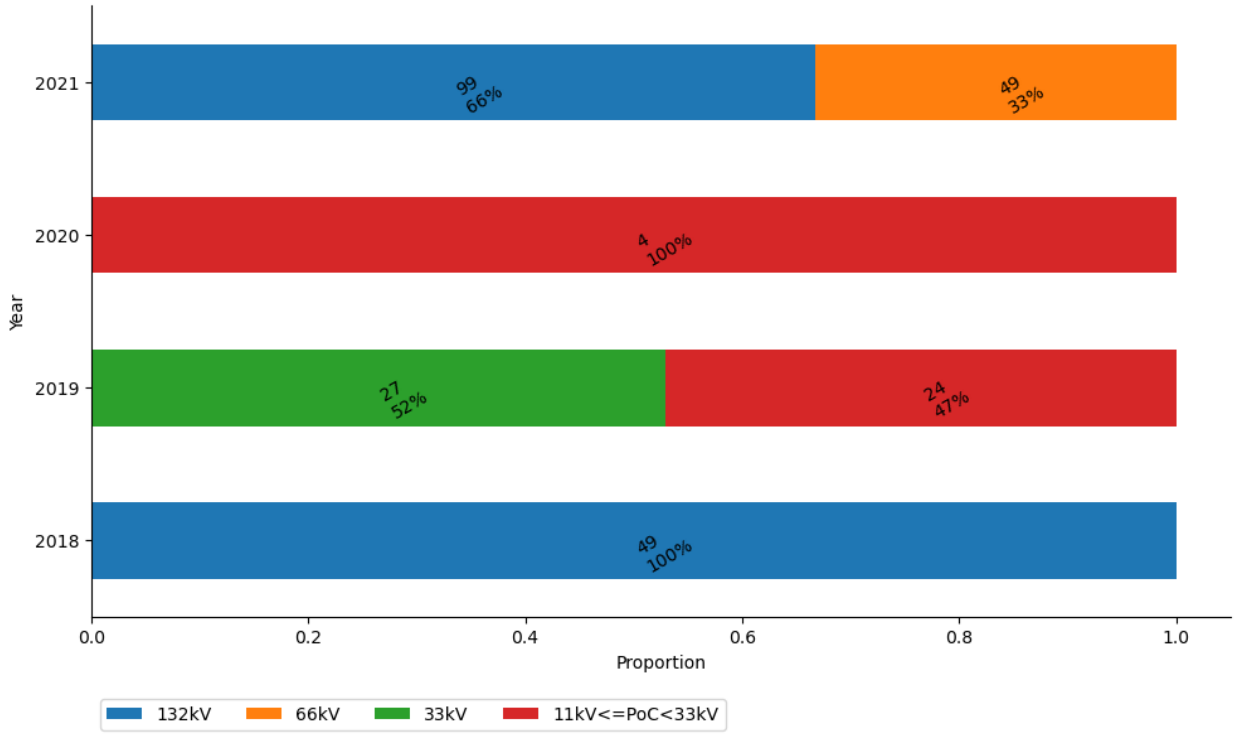


Figure 9-91: PoC Voltage by Year for Connected Offers (2018-2022) in Yorkshire

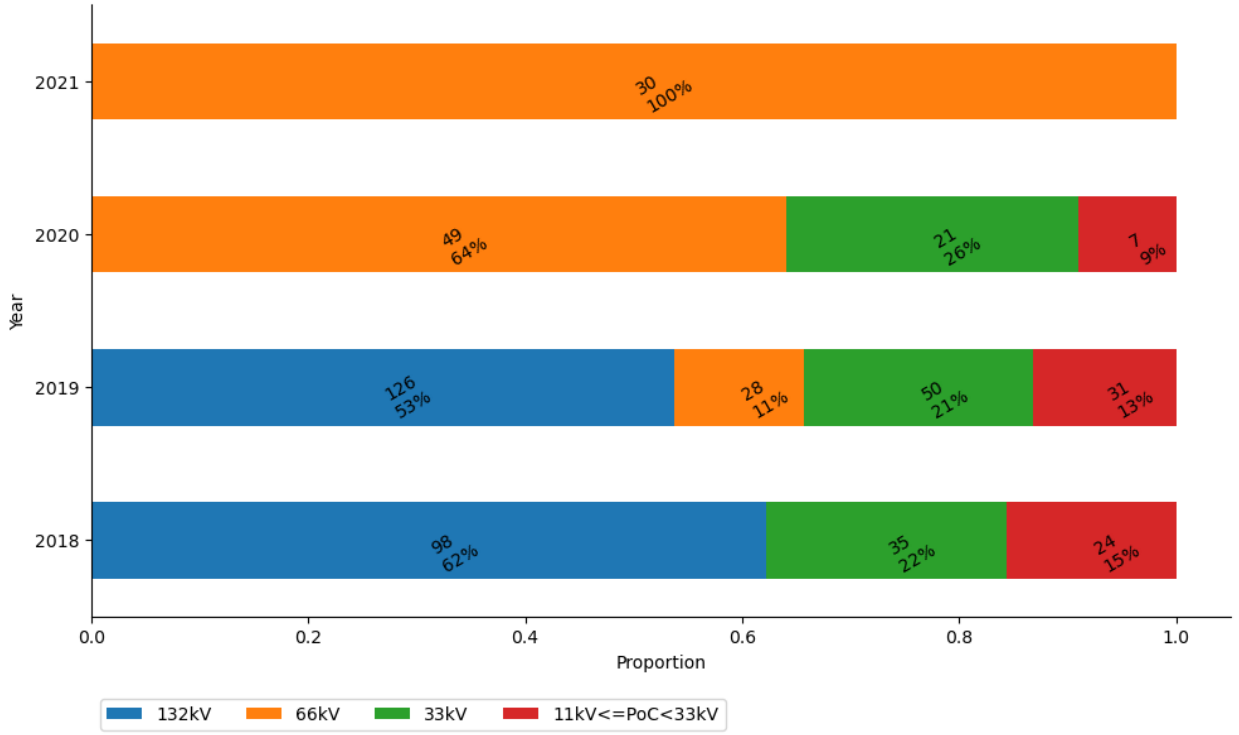
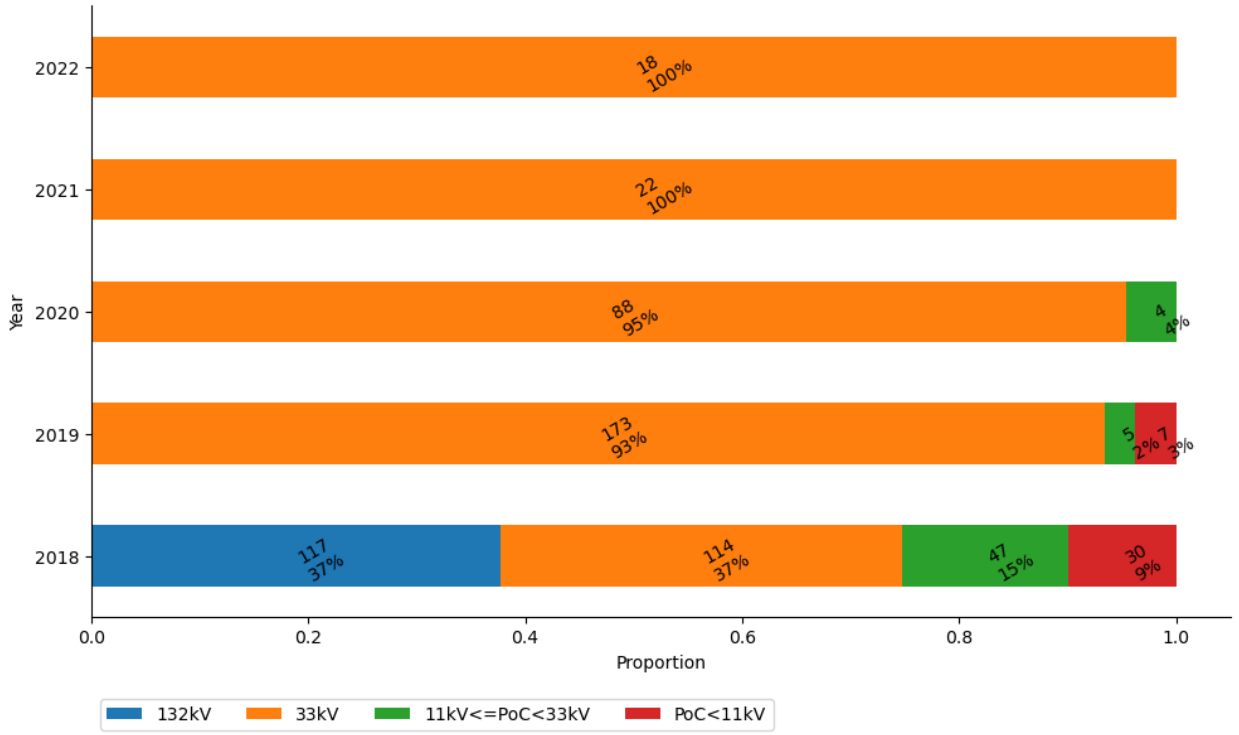


Figure 9-92: PoC Voltage by Year for Connected Offers (2018-2022) in North West England



Appendix Q: Top Players of Connected Offers (2018-2022) in Each Technology Area at Individual Licence Area Level

Table 9-59: Top Players of Connected Offers (2018-2022) in Each Technology Area in East Midlands

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	ARL [21.1, 26.2%]	EEB [45.6, 26.0%]	BURTON WOLD WIND FARM SOUTH LTD [8.3, 100.0%]	MERCIA POWER [91.0, 17.0%]
2	UK ENERGY RESERVE LTD [11.0, 13.7%]	NEXTPOWER SPV [25.2, 14.4%]	-	UK UTILITY RESERVE LIMITED [60.0, 11.2%]
3	BESS [10.4, 12.9%]	SCHOOL FARM SOLAR PARK LIMITED [12.0, 6.9%]	-	COVANTA ENERGY LIMITED [48.6, 9.1%]
4	BREACH FARM ENERGY STORAGE LIMITED; EELPOWER (OPCO1) LIMITED	LIGHTSOURCE [7.9, 4.5%]	-	UK CAPACITY RESERVE [40.1, 7.5%]
5	HC ESS2 LIMITED [7.4, 9.2%]	INFINIS [5.5, 3.1%]	-	POWERTREE [24.8, 4.6%]
Total	**[69.8, 86.9%]**	**[96.2, 54.9%]**	**[8.3, 100.0%]**	**[264.5, 49.4%]**

Table 9-60: Top Players of Connected Offers (2018-2022) in Each Technology Area in South Wales

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	-	GREENFIELDS (F) LIMITED [53.9, 33.7%]	INNOGY [90.2, 48.0%]	CONRAD [40.1, 26.7%]
2	-	LIGHTSOURCE [11.7, 7.3%]	LLYNFI AFAN RENEWABLE ENERGY PARK	BEAUFORT POWER LIMITED [21.0, 14.0%]
3	-	GRESHAM HOUSE SOLAR DISTRIBUTION LLP [9.2, 5.8%]	PENNANT WALTERS [20.0, 10.6%]	BRECON POWER LIMITED [20.8, 13.9%]
4	-	CARN NICHOLAS SOLAR LIMITED [8.4, 5.2%]	MYNYDD PORTREF WINDFARM LIMITED [12.0, 6.4%]	FLEXIBLE GENERATION LTD [20.0, 13.3%]
5	-	DRYM DEVELOPMENTS LIMITED [5.4, 3.4%]	BEAUFORT WIND LIMITED [9.9, 5.3%]	UK UTILITY RESERVE LIMITED [20.0, 13.3%]
Total	**-**	**[88.7, 55.5%]**	**[156.9, 83.5%]**	**[122.0, 81.2%]**

Table 9-61: Top Players of Connected Offers (2018-2022) in Each Technology Area in South West England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	SSDC OPIUM POWER LIMITED [27.7, 54.5%]	VOLTALIA UK LTD [32.0, 26.0%]	SCOTTISHPOWER RENEWABLES [32.5, 56.4%]	CONRAD [53.1, 18.2%]
2	HC ESS2 LIMITED [15.4, 30.3%]	BOWERHOUSE [15.6, 12.7%]	ALVESTON WIND PARK LIMITED [6.9, 12.0%]	VIRIDOR [44.4, 15.2%]
3	HOLMSLEIGH LIMITED [3.8, 7.4%]	TWO POST SOLAR LIMITED [9.0, 7.3%]	TREF NO 1 LIMITED [6.2, 10.7%]	IMERYS MINERALS LIMITED [35.3, 12.1%]
4	WAVE HUB GRID CONNECTION LIMITED [2.0, 3.9%]	NEXTENERGY SOLAR HOLDINGS VI LIMITED [8.4, 6.9%]	AMBITION COMMUNITY ENERGY CIC [4.2, 7.3%]	UNIVERSITY HOSPITALS BRISTOL AND WESTON NHS FOUNDATION TRUST [33.0, 11.3%]
5	EXETER CITY COUNCIL [2.0, 3.9%]	WEST CARCLAZE SPV LIMITED [6.9, 5.6%]	ACCOLADE WINES LIMITED [2.5, 4.3%]	HELE MANOR LIMITED [20.3, 6.9%]
Total	**[50.9, 100.0%]**	**[71.9, 58.5%]**	**[52.3, 90.7%]**	**[186.0, 63.7%]**

Table 9-62: Top Players of Connected Offers (2018-2022) in Each Technology Area in West Midlands

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	SANDWELL POWER LTD [25.7, 27.6%]	DCP 179 DEEMED CAPACITY [38.4, 25.4%]	GARREG LWYD ENERGY LTD [34.0, 100.0%]	SOUTH STAFFS WATER COMPANY [75.2, 20.1%]
2	WEDNESBURY POWER LTD [21.4, 23.0%]	NEXTPOWER LOWER STRENSHAM LIMITED [25.0, 16.5%]	-	NORIKER STAUNCH LIMITED [40.0, 10.7%]
3	LARPORT ENERGY STORAGE LIMITED;	ROCHESTER [10.4, 6.8%]	-	CONRAD [38.5, 10.3%]
4	WEST MIDLANDS GRID STORAGE TWO	KEELE UNIVERSITY [7.3, 4.8%]	-	HAMBLE POWER LIMITED [36.0, 9.6%]
5	SAFRAN LANDING SYSTEMS SERVICES UK	WEL SOLAR [6.5, 4.3%]	-	BANBURY POWER [24.0, 6.4%]
Total	**[93.1, 100.0%]**	**[87.6, 57.8%]**	**[34.0, 100.0%]**	**[213.8, 57.1%]**

Table 9-63: Top Players of Connected Offers (2018-2022) in Each Technology Area in North Scotland

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	-	-	NANCLACH LIMITED [37.1, 56.5%]	MVV ENVIRONMENT BALDOVIE LIMITED [9.5, 28.0%]
2	-	-	LOCHEND WIND ENERGY LIMITED [8.7, 13.3%]	BIOMASS ENERGY RENEWABLES LLP [5.3, 15.7%]
3	-	-	GREEN CAT RENEWABLES [6.7, 10.2%]	INVER HYDRO LIMITED; NATHRACH HYDRO LTD [2.0,
4	-	-	FYNE ENERGY LIMITED [6.6, 10.0%]	BALMORAL ESTATES FAO RICHARD GLEDSON;
5	-	-	GARTH WIND LTD [4.3, 6.5%]	BRUACH CAORAINN HYDRO LIMITED [1.5, 4.4%]
Total	**-**	**-**	**[63.4, 96.5%]**	**[29.8, 87.8%]**

Table 9-64: Top Players of Connected Offers (2018-2022) in Each Technology Area in Southern England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	MINETY SOUTH STORAGE EXPORT [110.7, 85.4%]	BRITISH SOLAR RENEWABLES LIMITED [15.2, 19.4%]	-	LODDON POWER LTD [16.0, 70.1%]
2	STERLING POWER UTILITIES [19.0, 14.6%]	NEXTENERGY SOLAR HOLDINGS VI LIMITED [15.1, 19.3%]	-	CONRAD [6.8, 29.9%]
3	-	GSII NETLEY SOLAR LIMITED; SUNSAVE [9.5, 12.1%]	-	-
4	-	EAST FARM SOLAR PARK LIMITED;	-	-
5	-	LAKE SIDE VIEW [4.1, 5.3%]	-	-
Total	**[129.7, 100.0%]**	**[63.5, 81.1%]**	**-**	**[22.8, 100.0%]**

Table 9-65: Top Players of Connected Offers (2018-2022) in Each Technology Area in East England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	AURA POWER [59.9, 20.1%]	AEE RENEWABLES PLC [40.0, 21.6%]	TCI RENEWABLES [6.2, 100.0%]	PLUTUS POWERGEN [80.0, 10.4%]
2	ATON ENERGY; STRATERA ENERGY LIMITED	LIGHTSOURCE [35.0, 18.9%]	-	COVANTA ROOKERY [66.4, 8.6%]
3	GREEN FROG [40.0, 13.4%]	SOLARFIELDS LTD [20.0, 10.8%]	-	ESB [60.0, 7.8%]
4	ASTRA VENTURES LTD [35.0, 11.7%]	ANESCO [16.5, 8.9%]	-	CENTRICA [48.5, 6.3%]
5	OST ENERGY LIMITED [20.0, 6.7%]	THE ABBEY GROUP [15.0, 8.1%]	-	WELSH POWER [48.0, 6.2%]
Total	**[254.9, 85.4%]**	**[126.5, 68.3%]**	**[6.2, 100.0%]**	**[302.9, 39.3%]**

Table 9-66: Top Players of Connected Offers (2018-2022) in Each Technology Area in South East England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BLUEBELL ENERGY [49.9, 36.1%]	S4N WORSTED LIMITED [5.0, 55.6%]	ENERGIEPARK UK NR GMBH & CO. KG [9.5, 100.0%]	LONDON POWER ASSOCIATES LTD [65.0, 46.4%]
2	RETHINK ENERGY LIMITED [34.0, 24.6%]	WIDEHURST SOLAR PARK [4.0, 44.4%]	-	VIRIDOR [27.0, 19.3%]
3	BESS [30.3, 21.9%]	-	-	ASHFORD POWER LIMITED [21.0, 15.0%]
4	GREEN HEDGE ENERGY BARN LTD [10.0, 7.2%]	-	-	UK POWER RESERVE THAMES STEEL POWER STATION [16.0, 11.4%]
5	HAZEL CAPITAL [8.0, 5.8%]	-	-	ROADNIGHT TAYLOR [7.5, 5.4%]
Total	**[132.2, 95.7%]**	**[9.0, 100.0%]**	**[9.5, 100.0%]**	**[136.5, 97.5%]**

Table 9-67: Top Players of Connected Offers (2018-2022) in Each Technology Area in North East England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	PORT OF TYNE BESS [35.0, 85.4%]	SOLAR FARM AND BATTERY [16.2, 37.1%]	MOOR HOUSE WIND FARM [12.3, 100.0%]	SALTHOLME GAS [99.9, 27.6%]
2	CLEVELAND POTASH [6.0, 14.6%]	BROOM CLOSE AND AINDERBY HOUSE	-	WORSET LANE GENERATION [49.9, 13.8%]
3	-	HUNGER HILL FARM SOLAR GENERATION; SAND HUTTON SOLAR GENERATION [5.0, 11.4%]	-	TEESSIDE RENEWABLE ENERGY PLANT (PORT CLARENCE BIOMASS) [49.0, 13.6%]
4	-	UNIPRES PV [4.6, 10.5%]	-	BLYTH [41.5, 11.5%]
5	-	TATA BEVERAGES GENERATION [3.7, 8.4%]	-	CRAMLINGTON BIOMASS GENERATION [31.7, 8.8%]
Total	**[41.0, 100.0%]**	**[43.8, 100.0%]**	**[12.3, 100.0%]**	**[272.0, 75.2%]**

Table 9-68: Top Players of Connected Offers (2018-2022) in Each Technology Area in Yorkshire

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	BURN PARK FARM ENERGY STORAGE [49.9, 45.0%]	LACEBY SOLAR FARM [8.0, 37.9%]	WITHERNWICK WIND FARM [8.2, 64.1%]	FERRYBRIDGE MULTI-FUEL [77.0, 14.0%]
2	GREEN LANE BESS, THURCROFT [49.9, 45.0%]	HECK SOLAR FARM [4.1, 19.6%]	GIBSON LANE WIND FARM [4.6, 35.9%]	BURN PARK FARM GAS UNITS [49.9, 9.1%]
3	BALBY CARR BANK [10.0, 9.0%]	PHOTOVOLTAICS, TRENT HOLME, STATHER ROAD [4.0,	-	SCAWBY BROOK EXPANSION [48.5, 8.8%]
4	THRYBERGH WEIR [1.2, 1.1%]	SOLAR PANELS, KELLINGLEY COLLIERY, TURVER'S LANE, KNOTTINGLEY [4.0, 18.9%]	-	TEMPLEBOROUGH BIOMASS [42.8, 7.8%]
5	-	WOOLEY MWTS [1.0, 4.7%]	-	GASCOIGNE WOOD (GASCGOINE WOOD SS)
Total	**[111.0, 100.0%]**	**[21.1, 100.0%]**	**[12.8, 100.0%]**	**[253.2, 46.1%]**

Table 9-69: Top Players of Connected Offers (2018-2022) in Each Technology Area in North Wales, Merseyside and Cheshire

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	SHAW-ENERGI LTD [20.0, 100.0%]	LIGHTSOURCE [7.4, 28.9%]	BRENIG [37.6, 91.9%]	QAS145803 [26.6, 33.3%]
2	-	UNITED UTILITIES [7.2, 28.1%]	KINGSPAN [1.8, 4.4%]	BURMEISTER & WAIN SCANDINAVIAN (BWSC)/ BIOENERGY INFRASTRUCTURE
3	-	33KV LIMITED [5.0, 19.5%]	CLEANEARTH ENERGY [1.5, 3.7%]	WELSH POWER [16.8, 21.1%]
4	-	NEXT ENERGY CAPITAL [3.0, 11.7%]	-	INTERLINQ QUEENSFERRY DEESIDE [14.0, 17.5%]
5	-	SPF MOORFARM LTD [3.0, 11.7%]	-	WINDCARE LTD [2.4, 3.0%]
Total	**[20.0, 100.0%]**	**[25.6, 100.0%]**	**[40.9, 100.0%]**	**[79.8, 100.0%]**

Table 9-70: Top Players of Connected Offers (2018-2022) in Each Technology Area in South and Central Scotland

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	RES [20.0, 100.0%]	QUINTAS ENERGY UK [4.8, 55.6%]	AUCHROBERT WIND ENERGY LIMITED;	SIMEC/ LIBERTY HOUSE [17.0, 31.9%]
2	-	LIGHTSOURCE [3.8, 44.4%]	WIND PROSPECT [35.0, 23.0%]	EDINBURGH ENERGY RECOVERY FACILITY [15.0, 28.2%]
3	-	-	NATURAL POWER [24.0, 15.7%]	NO INFO. [11.6, 21.8%]
4	-	-	WOOD GROUP [7.5, 4.9%]	GREENSPAN CONTRACTORS LTD [4.0, 7.5%]
5	-	-	GREEN POWER CONSULTANTS [6.0, 3.9%]	ADAM WILSON AND SONS LTD [2.3, 4.3%]
Total	**[20.0, 100.0%]**	**[8.6, 100.0%]**	**[144.5, 94.8%]**	**[49.9, 93.7%]**

Table 9-71: Top Players of Connected Offers (2018-2022) in Each Technology Area in North West England

Top Player/Tech	Battery	Photovoltaic	Onshore Wind	Others
1	CENTRICA [50.0, 33.5%]	UNITED UTILITIES [6.3, 14.0%]	BECK BURN WINDFARM LIMITED [31.1, 70.2%]	UK POWER RESERVE [95.5, 19.6%]
2	HC ESS4 LIMITED [49.0, 32.8%]	BILSBORROW SOLAR PROJECT LIMITED [5.0, 11.1%]	HALLBURN FARM LTD [13.2, 29.8%]	CONRAD [62.1, 12.7%]
3	MARK HENSOR [20.0, 13.4%]	WREAY SOLAR LIMITED [5.0, 11.1%]	-	TGC [30.0, 6.1%]
4	ARL [18.0, 12.1%]	WREA GREEN SOLAR LIMITED [5.0, 11.1%]	-	MOORFIELD GENERATION [21.2, 4.3%]
5	CLEATOR BATTERY STORAGE LIMITED [10.0, 6.7%]	GSII CLAY CROSS LIMITED [4.2, 9.4%]	-	BANCROFT GENERATION LIMITED [21.1, 4.3%]
Total	**[147.0, 98.4%]**	**[25.4, 56.7%]**	**[44.2, 100.0%]**	**[229.8, 47.1%]**

Appendix R: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 at Individual Licence Area Level

Table 9-72: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in East Midlands

Top Player/Year	2018	2019	2020	2021	2022
1	MERCIA POWER [53.4, 29.8%]	UK UTILITY RESERVE LIMITED [40.0, 45.3%]	MERCIA POWER [8.3, 26.3%]	FUTURE EARTH ENERGY (DRAKELOW) LIMITED [23.8, 26.5%]	COVANTA ENERGY LIMITED [48.6, 32.7%]
2	KILN POWER LIMITED [22.7, 12.7%]	MERCIA POWER [16.1, 18.3%]	THORNTON [8.0, 25.3%]	THORNTON [16.1, 18.0%]	EEB [45.6, 30.7%]
3	UK CAPACITY RESERVE; UK UTILITY RESERVE LIMITED [20.0, 11.1%]	BESS [10.4, 11.8%]	CUMMINS ENGINE CO LTD [4.9, 15.6%]	MERCIA POWER [13.1, 14.7%]	ARL [21.1, 14.2%]
4	ALKANE ENERGY [19.0, 10.6%]	BRITVIC SOFT DRINKS LTD UK [9.0, 10.2%]	MEGGITT AEROSPACE LTD [4.6, 14.4%]	SCHOOL FARM SOLAR PARK LIMITED [12.0, 13.4%]	UNIVERSITY OF WARWICK [18.2, 12.2%]
5	SAINSBURYS [10.9, 6.1%]	MERCEDES AMG [4.7, 5.3%]	IBSTOCK BUILDING PRODUCTS LTD [4.1, 13.0%]	UK ENERGY RESERVE LTD [11.0, 12.3%]	GRESLEY POWER LTD [6.9, 4.6%]
Total	**[146.0, 81.4%]**	**[80.2, 90.9%]**	**[29.9, 94.6%]**	**[76.0, 84.8%]**	**[140.3, 94.4%]**

Table 9-73: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in South Wales

Top Player/Year	2018	2019	2020	2021	2022
1	INNOGY [90.2, 62.7%]	ST MERRYN MEAT LIMITED [1.5, 90.4%]	GREENFIELDS (F) LIMITED [53.9, 74.2%]	BEAUFORT POWER LIMITED [21.0, 61.3%]	CARN NICHOLAS SOLAR LIMITED [8.4, 79.8%]
2	BRECON POWER LIMITED [20.8, 14.5%]	UNIVERSITY OF SOUTH WALES [0.2, 9.6%]	AB INBEV UK LIMITED [7.0, 9.6%]	GRESHAM HOUSE SOLAR DISTRIBUTION LLP [9.2, 27.0%]	INFINIS [2.0, 19.1%]
3	UK UTILITY RESERVE LIMITED [20.0, 13.9%]	-	CARDIFF COUNTY COUNCIL [5.0, 6.9%]	GRAIG FATHA CE TURBINE LTD [2.5, 7.3%]	HOWARD TENENS LIMITED [0.1, 0.8%]
4	BEAUFORT WIND LIMITED [9.9, 6.9%]	-	CE RUSH WALL TURBINE LIMITED [3.5,	YUASA BATTERY UK LTD [1.5, 4.4%]	CRANE PROCESS FLOW TECHNOLOGIES LTD
5	RESOURCES MANAGEMENT U K LIMITED [1.5, 1.1%]	-	HYDRO ELECTRIC DEVELOPMENTS LIMITED [2.0, 2.7%]	-	-
Total	**[142.5, 99.0%]**	**[1.7, 100.0%]**	**[71.4, 98.3%]**	**[34.2, 100.0%]**	**[10.5, 100.0%]**

Table 9-74: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in South West England

Top Player/Year	2018	2019	2020	2021	2022
1	ENERSYST LIMITED; UK UTILITY RESERVE LIMITED [20.0, 35.3%]	VIRIDOR [44.4, 57.7%]	SSDC OPIUM POWER LIMITED [27.7, 55.6%]	UNIVERSITY HOSPITALS BRISTOL AND WESTON NHS FOUNDATION	SCOTTISHPOWER RENEWABLES [32.5, 37.0%]
2	WEST CARCLAZE SPV LIMITED [6.9, 12.2%]	HELE MANOR LIMITED [20.3, 26.4%]	CONRAD [9.3, 18.7%]	VOLTALIA UK LTD [32.0, 36.9%]	BIOGAS TECHNOLOGY LIMITED [19.8, 22.5%]
3	HOLMSLEIGH LIMITED [3.8, 6.6%]	ROYAL UNITED HOSPITAL BATH NHS TRUST [4.1, 5.4%]	CREACOMBE GRID LTD [5.5, 11.1%]	BRIDGWATER RESOURCE RECYCLING LIMITED [10.0, 11.5%]	BOWERHOUSE [15.6, 17.7%]
4	THE CORNWALL BAKERY [2.7, 4.9%]	EON [3.0, 3.9%]	CORNWALL COUNCIL [2.4, 4.7%]	TWO POST SOLAR LIMITED [9.0, 10.4%]	CONRAD [7.3, 8.3%]
5	SUSTAINABLE ENERGY GENERATION LIMITED [1.8, 3.2%]	ACCOLADE WINES LIMITED [2.5, 3.3%]	WAVE HUB GRID CONNECTION LIMITED [2.0, 4.0%]	PATTEMORES TRANSPORT (CREWKERNE) LTD [1.7,	WSE [5.4, 6.2%]
Total	**[55.2, 97.5%]**	**[74.3, 96.6%]**	**[47.0, 94.2%]**	**[85.7, 98.8%]**	**[80.7, 91.7%]**

Table 9-75: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in West Midlands

Top Player/Year	2018	2019	2020	2021	2022
1	BANBURY POWER [24.0, 21.0%]	HAMBLE POWER LIMITED [36.0, 65.9%]	SOUTH STAFFS WATER COMPANY [75.2, 63.6%]	CONRAD [38.5, 30.4%]	DCP 179 DEEMED CAPACITY [38.4, 61.9%]
2	UBB WASTE (GLOUCESTERSHIRE)	MERCIA POWER [8.0, 14.6%]	NEXTPOWER LOWER STRENSHAM LIMITED	SANDWELL POWER LTD [25.7, 20.2%]	POWER INITIATIVES [5.1, 8.2%]
3	LARPORT ENERGY STORAGE LIMITED; LAVANT POWER LTD;	WEST MIDLANDS GRID STORAGE TWO LTD [5.3, 9.8%]	GLOUCESTERSHIRE HOSPITALS SUBSIDIARY COMPANY LTD [7.6,	WEDNESBURY POWER LTD [21.4, 16.9%]	1&1 IONOS LTD [5.1, 8.1%]
4	SHOVEL READY [4.5, 3.9%]	ST AUSTELL BREWERY COMPANY LTD [2.2, 4.1%]	THE ROYAL WOLVERHAMPTON HOSPITALS N	MULLER DAIRY (UK) LTD [10.0, 7.9%]	UK WINDOWS AND DOORS LIMITED [3.2, 5.2%]
5	MUELLER EUROPE LIMITED [2.5, 2.2%]	COVEYA LIMITED [1.4, 2.6%]	THORNFIELD [4.0, 3.4%]	KEELE UNIVERSITY [7.3, 5.8%]	STONE COMPUTERS LTD [1.3, 2.1%]
Total	**[113.0, 98.9%]**	**[53.0, 97.1%]**	**[116.6, 98.6%]**	**[102.9, 81.1%]**	**[53.1, 85.5%]**

Table 9-76: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in East England

Top Player/Year	2018	2019	2020	2021	2022
1	CENTRICA [48.5, 17.0%]	AEE RENEWABLES PLC; GREEN FROG [40.0, 30.0%]	COVANTA ROOKERY [66.4, 31.1%]	AURA POWER [49.9, 23.0%]	ASTRA VENTURES LTD [35.0, 36.1%]
2	BWSC EAST ANGLIA LIMITED [48.0, 16.8%]	CONRAD [12.0, 9.0%]	ATON ENERGY [50.0, 23.4%]	WELSH POWER [48.0, 22.1%]	SOLARFIELDS LTD [20.0, 20.7%]
3	PLUTUS POWERGEN [40.0, 14.0%]	AGR; SOLAR INC LTD [10.0, 7.5%]	LIGHTSOURCE [35.0, 16.4%]	SUN CREDIT [22.0, 10.1%]	AGR [15.0, 15.5%]
4	LOW CARBON ALLIANCE;	PORT OF TILLBURY LONDON LTD [9.0,	AMP; PUSH ENERGY [14.0,	PEAKGEN POWER LTD [20.0, 9.2%]	AMP [10.1, 10.5%]
5	INDUSTRIAL CHEMICALS LTD [17.0,	HBS GROUP SOUTHERN LTD [7.0, 5.3%]	ANESCO [13.3, 6.2%]	THE ABBEY GROUP [15.0, 6.9%]	CONRAD [7.2, 7.4%]
Total	**[193.5, 67.7%]**	**[128.0, 95.9%]**	**[192.7, 90.1%]**	**[154.9, 71.3%]**	**[87.3, 90.2%]**

Table 9-77: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in South East England

Top Player/Year	2018	2019	2020	2021	2022
1	BESS [30.3, 42.2%]	S4N WORSTED LIMITED [5.0, 100.0%]	LONDON POWER ASSOCIATES LTD [65.0,	RETHINK ENERGY LIMITED [34.0, 100.0%]	-
2	UK POWER RESERVE THAMES STEEL POWER STATION [16.0,	-	-	-	-
3	ENERGIEPARK UK NR GMBH & CO. KG [9.5, 13.2%]	-	-	-	-
4	ROADNIGHT TAYLOR [7.5, 10.5%]	-	-	-	-
5	GRID BATTERY STORAGE LIMITED [6.0,	-	-	-	-
Total	**[69.3, 96.5%]**	**[5.0, 100.0%]**	**[65.0, 100.0%]**	**[34.0, 100.0%]**	**-**

Table 9-78: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in North East England

Top Player/Year	2018	2019	2020	2021	2022
1	TEESSIDE RENEWABLE ENERGY PLANT (PORT CLARENCE BIOMASS)	BOSCAR GRANGE HYBRID GENERATION [27.0, 52.9%]	UNIPRES PV [4.6, 100.0%]	SALTHOLME GAS [99.9, 66.7%]	-
2	-	QUEEN VICTORIA ROYAL INFIRMARY [12.0, 23.5%]	-	WORSET LANE GENERATION [49.9, 33.3%]	-
3	-	CLEVELAND POTASH [6.0, 11.8%]	-	-	-
4	-	HOWDON STW CHP [6.0, 11.8%]	-	-	-
5	-	-	-	-	-
Total	**[49.0, 100.0%]**	**[51.0, 100.0%]**	**[4.6, 100.0%]**	**[149.8, 100.0%]**	**-**

Table 9-79: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in Yorkshire

Top Player/Year	2018	2019	2020	2021	2022
1	BURN PARK FARM GAS UNITS [49.9, 31.5%]	FERRYBRIDGE MULTI-FUEL [77.0, 32.6%]	GREEN LANE BESS, THURCROFT [49.9, 64.0%]	CAXTON WAY GAS [30.0, 100.0%]	-
2	SCAWBY BROOK EXPANSION [48.5, 30.7%]	BURN PARK FARM ENERGY STORAGE [49.9, 21.1%]	HULL ENERGY CENTRE [21.0, 26.9%]	-	-
3	GASCOIGNE WOOD (GASCGOINE WOOD SS) STOR [35.0, 22.1%]	BALBY CARR BANK [30.0, 12.7%]	2 X 2.5MW SYNCH CHP, ARLA FOODS, STOURTON [5.0, 6.4%]	-	-
4	CHESTERFIELD ROAD GENERATION; THE FOUNDRY [8.0, 5.1%]	CHESTERFIELD ROAD LARGE GENERATION; WATERVOLE WAY GENERATION [20.0, 8.5%]	OTLEY ROAD CHP [2.1, 2.6%]	-	-
5	BANKWOOD LANE INDUSTRIAL [3.8, 2.4%]	SELBY SALADS LIMITED [10.1, 4.3%]	-	-	-
Total	**[153.2, 96.8%]**	**[207.0, 87.6%]**	**[78.0, 100.0%]**	**[30.0, 100.0%]**	**-**

Table 9-80: Top Players of Connected Offers (2018-2022) in Each Year Since 2018 in North West England

Top Player/Year	2018	2019	2020	2021	2022
1	CENTRICA [50.0, 22.5%]	HC ESS4 LIMITED [49.0, 33.9%]	CONRAD [62.1, 66.7%]	HILLHOUSE GENERATION LIMITED [20.0, 88.5%]	ARL [18.0, 100.0%]
2	TGC [30.0, 13.5%]	BANCROFT GENERATION LIMITED [21.1, 14.6%]	BIOGAS TECHNOLOGY LIMITED [21.1, 22.6%]	ALDERLEY PARK LIMITED [2.6, 11.5%]	-
3	MOORFIELD GENERATION [21.2, 9.5%]	CHADDERTON GENERATION LIMITED; PIMBO GENERATION LIMITED [21.1, 14.6%]	VITAL ENERGI [5.7, 6.1%]	-	-
4	MY POWER UK [20.3, 9.1%]	MARK HENSOR [20.0, 13.9%]	UNITED UTILITIES [3.9, 4.2%]	-	-
5	UK POWER RESERVE [17.5, 7.9%]	SHOVEL READY [7.0, 4.8%]	TELEDATA UK LTD [0.4, 0.4%]	-	-
Total	**[139.0, 62.5%]**	**[139.2, 96.4%]**	**[93.1, 100.0%]**	**[22.6, 100.0%]**	**[18.0, 100.0%]**