Swansea Council

Renewable & Low Carbon Energy Assessment (2023-2038)

Initial Report December 2024

CITY SCIENCE
delivering decarbonisation

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Glossary

Acronym	Meaning
AD	Anaerobic Digestion
ASHP	Air Source Heat Pump
BEIS	Department of Business, Energy & Industrial Strategy
BIR	Building Integrated Renewables
CHP	Combined Heat & Power
COP	Coefficient of Performance
DHN	District Heat Network
DESNZ	Department for Business, Energy Security & Net Zero
FiT	Feed-in Tariff
GSHP	Ground Source Heat Pump
GW	Gigawatt
GWh	Gigawatt hours
LAEP	Local Area Energy Plan
MW	Megawatt
MWh	Megawatt hours
Ofgem	Office of Gas and Electricity Markets
REGO	Renewable Guarantees of Origin
REPD	Renewable Energy Planning Database
RLCEA	Renewable & Low Carbon Energy Assessment
RO	Renewable Obligation
SCOP	Seasonal Coefficient of Performance
SC	Swansea Council
LDP2	Swansea Local Development Plan 2023-2038

1 Introduction

This initial report is for the purposes of informing the Pre-Deposit Plan (Preferred Strategy) for the Swansea Local Development Plan 2023-2038 (LDP2). In this regard, this report contains two initial stages of a Renewable & Low Carbon Energy Assessment (RLCEA).

1.1 Study Purpose & Context

Swansea Council (SC) have commissioned City Science to undertake initial stages of a Renewable & Low Carbon Energy Assessment (RLCEA) for their administrative area. The purpose of an RLCEA is to formulate robust renewable and low carbon energy evidence to inform the preparation of a Local Development Plan (LDP).

The approach for RLCEAs has been set out in Welsh Government guidance, the **Practice Guidance – Planning for Renewable & Low Carbon Energy: A toolkit for Planners** (Welsh Government, 2015), referred to henceforth as the "**Toolkit**". The Toolkit sets out several evidence base stages for an RLCEA including:

- Area wide renewable energy assessment
- Building integrated renewables uptake assessment
- Heat opportunities mapping
- Detailed viability appraisal of strategic sites

This evidence base aims to estimate the scale and opportunities for renewable energy within the study area, to provide focus for setting local policy and targets; therefore, assisting SC in tackling key issues including climate change, fuel poverty and decarbonisation. It will also provide direction to the authority on how it can play its part in meeting the National and UK renewable energy targets.

This interim report for the preferred strategy addresses part of the "area wide renewable energy assessment" (the first bullet point above), by undertaking energy demand projections to the end of the plan year (2038), and by assessing the existing renewable capacity in Swansea. Future work will complete the full area wide renewable energy assessment by assessing the potential for further deployment of technologies such as onshore wind, ground PV and rooftop PV.

1.2 Method & Scope

1.2.1 Scope of Assessment

The geographic scope of this assessment is that of the administrative boundaries of SC, as that is what is governed by the authority's planning policy. The emerging LDP2 covers the period 2023-2038, the RLCEA assessment therefore has been aligned with this date, making projections to 2038.

A full RLCEA is yet to be completed, so the scope of the technologies included may change, but it could include the following:

- Onshore Wind
- Biomass energy resource
- Energy from waste (waste incineration)
- Ground Mount Solar PV: generating electricity
- Anaerobic Digestion (AD): combustion of biogas generating heat and electricity simultaneously. Waste feedstocks considered: food waste, agricultural animal manure, agricultural poultry litter, sewage sludge and energy crops.
- Hydropower
- Building Integrated Renewables (BIR): generation of heat or electricity utilising small scale, building integrated renewables such as rooftop solar PV, air source heat pumps, and ground source heat pumps.
- Solar thermal hot water panels

Other low carbon opportunities considered include:

- Waste heat: e.g. from industrial processes or power stations.
- District Heating Networks (DHN): serving residential and/or non-residential heating loads.

Renewable and local carbon opportunities which are not expected to be explored in the full RLCEA (in accordance with the Toolkit):

- Liquid biofuels
- Geothermal energy
- Offshore wind

The Toolkit does not cover the assessment of all renewable energy resources, including those listed above. It is focused on onshore renewable energy options only. It also does not cover renewable energy options that are unlikely to be generally accessible at a local authority level.

1.2.2 Overarching Method

An RLCEA is expected to largely follow the method set out in the "Toolkit" (Welsh Government, 2015). In some instances, the methodologies set out in the Toolkit references superseded policies or financial incentive schemes which are no longer active. It uses an assessment of Pembrokeshire as an example for the Toolkit, with future forecasts and targets for 2020, which does not align with the target year in this study of 2038. It has therefore been deemed appropriate to deviate from the Toolkit's suggested methodologies where they have been considered out of date, and where this has been done, it has been clearly stated in this report.

The overarching aim of an RLCEA is to identify potential renewable and low carbon energy resources and set targets for their deployment for the end of the LDP2 period (2038). The results of this assessment are aimed at informing planning policy development for LDP2 (most notably the production of the Deposit Plan). It is not meant as a tool for assessing planning applications.

The Welsh Toolkit outlines potential policy objectives for local planning authorities to consider with respect to renewable and low carbon energy, along with evidence bases which should inform each of the policies. For Swansea, the policy objectives of the RLCEA could include developing renewable energy targets, informing site allocations for developments, and outlining further actions for the local authority, public sector, and wider stakeholders to assist in the delivery of strategic opportunities for renewable or low carbon energy generation. The policy objectives of the RLCEA are yet to be determined in this initial report but can be addressed as part of the preparation of the Deposit Plan.

1.2.3 Notation Used

It is important to distinguish between energy generators that produce heat or electricity, or both (such as in CHP). Electrical capacity and electrical energy generation will be denoted with a suffix "e", e.g. MW_e or MWh_e, and heat capacity and generation will be denoted with suffix "th", e.g. MW_{th} and MWh_{th}.

2 Existing & Future Energy Demand Baseline

Chapter in Brief

This chapter provides a summary of the current energy use in Swansea and makes a projection of energy demand to the end of LDP2 period (2038). The energy demands shown here will be compared to the renewable energy potential in the full RLCEA once complete.

2.1 Purpose & Approach

To understand the magnitude of renewable energy generation within Swansea compared to its energy demands, we assess data on current energy demands and make a projection of what energy demands may be at the end of the LDP2 period (in 2038). The Welsh Toolkit refers to an old UK Government forecast of energy demand to develop this projection: the UK Renewable Energy Strategy, 2008 (HM Government, 2008). This study has instead used the latest DESNZ's Energy and Emissions projection 2000 to 2050 (DESNZ, 2024).

DESNZ publish the subnational final energy consumption dataset each year for local authorities across Great Britain, accounting for various sectors and fuel types (DESNZ, 2024). The latest year of data available was 2022 and is used in this analysis.

The forecast of energy consumption in 2038 was determined by taking the percentage change in energy demand between 2022 and 2038 in DESNZ's energy and emissions projections publication, under their "Reference case" scenario in Annex F (DESNZ, 2024). This Reference case represents the expected final energy demand based on current policies that have been implemented or are planned to be implemented. It is not representative of a net zero scenario. The Reference case projection is for the UK energy system. This analysis therefore assumes that the national projection of energy demand can be considered representative of the expected changes in the Swansea energy system.

The final energy demand categories in the DESNZ subnational dataset do not map exactly to those in the DESNZ energy projections. A mapping between these two datasets was therefore developed as part of this projection, which has been provided in Appendix A – Energy Projections Mapping. As per the Welsh Toolkit, the energy demands have been simplified into Electricity, Heating fuels and Transport fuels. Aviation and shipping fuels are not included in the method set out in the Toolkit, or in this analysis, as the energy demands for these sectors are not reported at a local level in any national statistics. These demands are also thought to be small in comparison to other sectors.

2.2 Results

The result of this analysis is shown in Table 2-1 below. The energy demand for electricity, heating fuels and transport (road and rail) fuels in 2022 has been estimated to be approximately 4,570 GWh. The DESNZ reference case projection from 2022 to 2038 showed a 40% increase in electricity consumption, a 7% increase in heating fuels, and a 41% decrease for transport fuels driven by electric vehicle uptake. This results in an overall decrease from 2022 of 140 GWh.

Category*	2022 demand (GWh)	DESNZ energy & emissions projection		2038 LAEP projection Widespread Engagement (GWh)
		2038 Increase from 2022	2038 Estimation (GWh)	
Electricity	799	40%	1,116	1,880
Heating fuels	2,267	7%	2,432	820
Transport fuels (road & rail)	1,505	-41%	882	380
Total	4,571	-3%	4,431	3,080

In the future projections, some heating and road transport demands electrify, meaning that the energy demand of these services switches over into the "electricity" category. The "heating fuels" and "transport fuels" categories refer specifically to the use of combustible fuels such as natural gas, petrol, diesel, biomass and hydrogen.

Table 2-1: Existing and Future Energy Demand Projections for Swansea

2.3 Swansea LAEP Projection

The method described above follows the approach stated in the Toolkit. We note that the use of the DESNZ "Reference" case scenario may provide 2038 energy demands which are substantially different to the 2038 demands in an energy system which is heading towards net zero by 2050.

For this reason, the recent Swansea LAEP was reviewed as an alternative 2038 projection, which is representative of a net zero Swansea (City Science, 2024). The LAEP modelled two net zero scenarios: Widespread Engagement and Widespread Hydrogen. The former being representative of a future where there is high consumer engagement with net zero, resulting in high uptake of electrified technologies such as heat pumps and electric vehicles, and the latter envisioning a "system" change instead of consumer change, with hydrogen being supplied through the gas grid for heating, and a higher amount of hydrogen vehicles.

The Widespread Engagement scenario was chosen as the alternative projection, as the RLCEA will have a strong focus on renewable power (e.g. wind and PV), and this scenario has higher projected electricity demands than Widespread Hydrogen. The increase in electricity demand is much more substantial in the LAEP than the DESNZ reference case projection, increasing from the 2022 demand by 135% to 1,880 kWh in 2038. The heating fuel demand, which increases in the DESNZ reference case projection, decreases significantly in the LAEP by 64% to 820 kWh. Transport fuel demand decreases in both projections but to a greater degree in the LAEP; a reduction from the 2022 demand of 75%.

3 Existing & Proposed Low Carbon Technologies

Chapter in Brief

This chapter outlines the currently installed and proposed capacity of renewable and low carbon energy generation in Swansea.

3.1 Methodology

Understanding the City and County of Swansea's existing and proposed renewable and low carbon technologies is a useful exercise in setting a baseline from which targets can be developed (Welsh Government, 2015).

There is no single comprehensive source of data on renewable installations, so this exercise involves searching through multiple datasets and performing corroboration where possible. The below method searches through multiple public datasets, cross references against SC planning data, and then performs a final check against a Welsh Government publication which itself performed a corroboration of various renewable datasets.

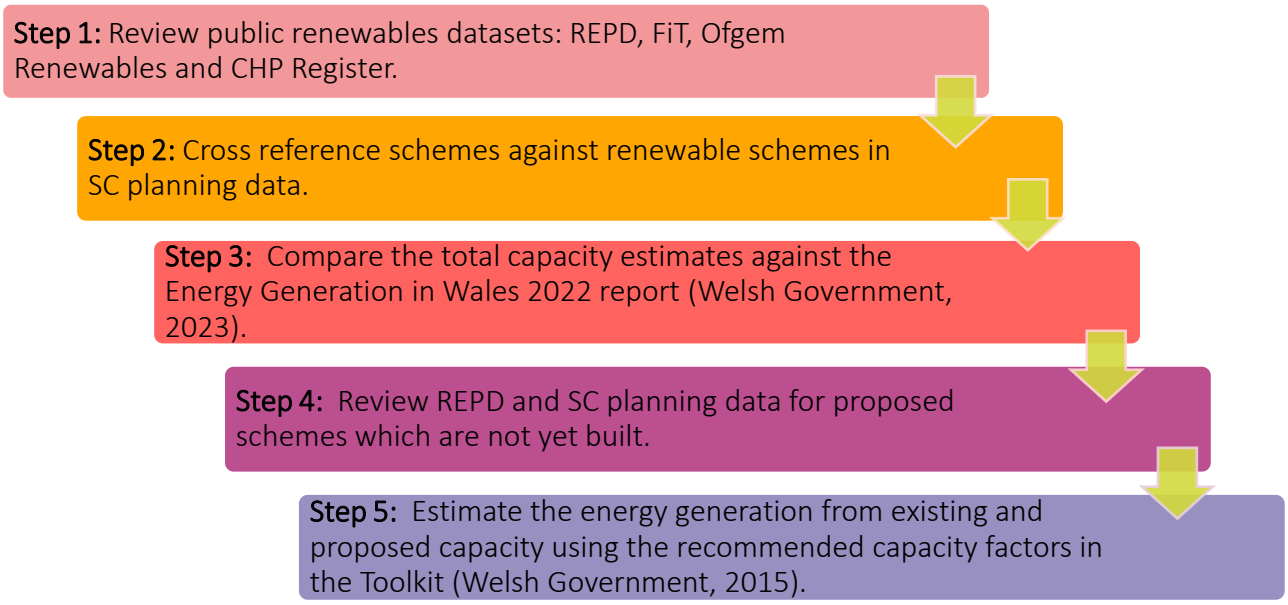

Figure 3-1: Methodology for Assessing Existing and Proposed Low Carbon Technologies

3.1.1 Public Datasets Used

The following public data sources have been reviewed to produce an estimate of the existing renewable and low carbon technologies:

- Renewable Energy Planning Database (REPD) (DESNZ, 2024).
- Ofgem Feed-in Tariff (FIT) register (Ofgem, 2024).
- Ofgem Renewables and CHP register (Ofgem, 2024) including registered stations under the Renewable Obligation (RO) and Renewable Guarantees of Origin (REGO).

The REPD began in 2014 (though it captures schemes developed prior to this year), capturing renewable schemes of 1 MW and above installed capacity, until 2021 when it began logging any schemes from 150 kW and above. Projects below 1 MW that went through the planning system before 2021 may therefore not be represented in the REPD.

The FiT register, published by Ofgem, provides details of any renewable schemes that applied for the FiT incentive between April 2010 and April 2019. Any schemes developed outside of that period, or that did not claim for the FiT incentive within that period, would not be included in the register.

The RO scheme was designed to encourage generation of electricity from larger renewable sources in the UK. The RO scheme came into effect in 2002 in Great Britain and the scheme closed to all new generating capacity 1 April 2017.

The REGO scheme provides certificates that evidence that electricity sold has come from a renewable source. The scheme came into effect in 2003 and is running up to the present day.

3.1.2 Corroboration of Datasets

The developments identified were then compared against all developments listed in SC's planning application data. There is overlap between the datasets, so where possible, renewable developments were corroborated against each other where a unique identifier could be found (e.g. a planning reference or a unique site name). Once corroborated, the total renewable energy generation capacity by technology was then compared to the totals provided in the Energy Generation in Wales 2022 study (Welsh Government, 2023). Further information on the corroboration of datasets, and comparison to Energy Generation in Wales 2022 is provided in Appendix B – Details on Renewable Dataset Corroboration.

Notes on the estimation of renewable energy capacity:

Mapping of developments was also used to cross reference schemes across datasets where a unique identifier was not available (see Figure 3-2 below).

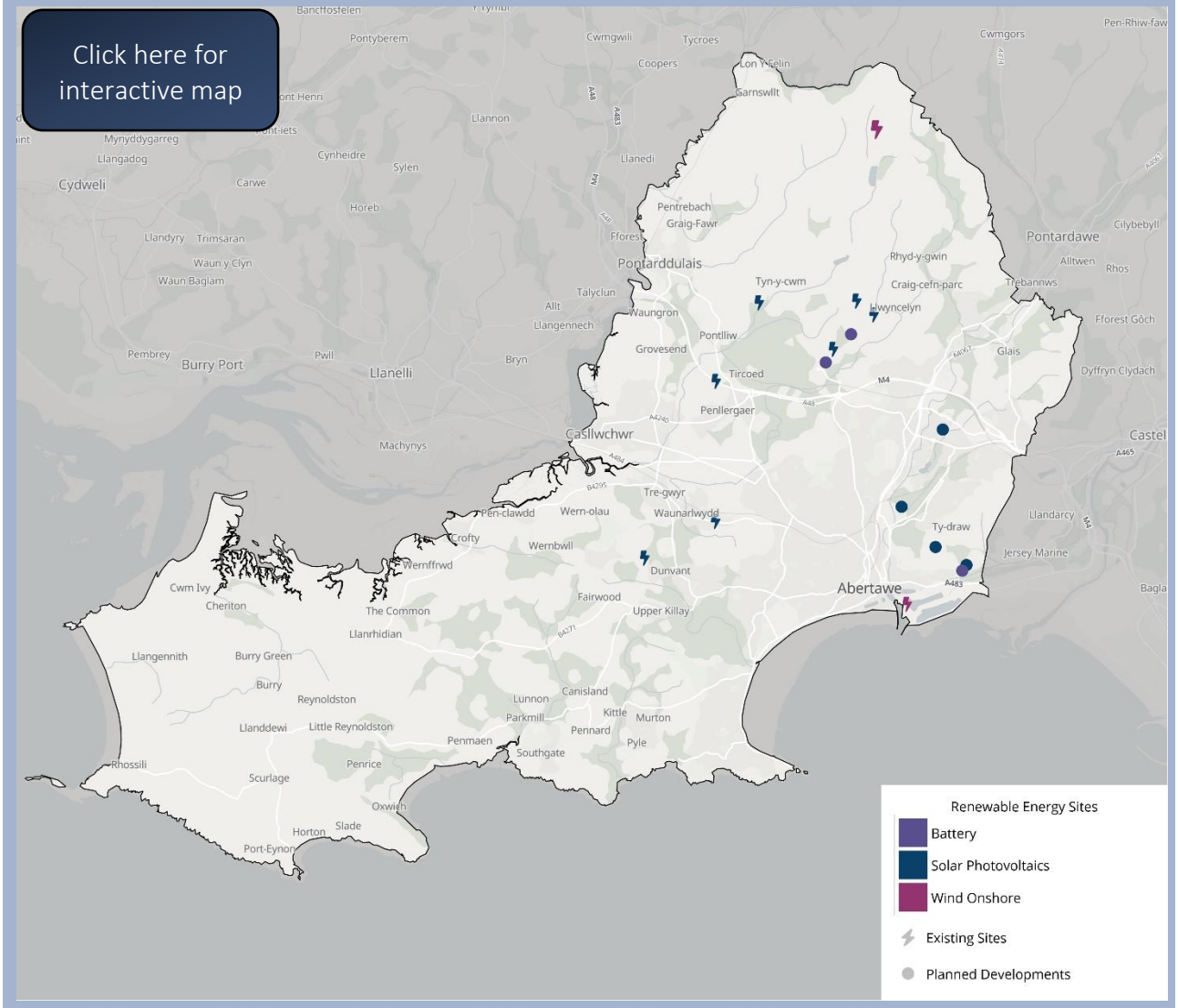

Figure 3-2: Sites included in the baseline assessment (DESNZ, 2024) (Ofgem, 2024)

Onshore wind developments were taken from the REPD, Ofgem Renewables Register, and Ofgem FiT register. The datasets reported four existing sites with a capacity of 34.2 MW and no new planned developments. Ground PV developments were identified using the same datasets, reporting 19 existing ground PV sites with a total capacity of 37.1 MW and three planned developments with a combined capacity of 57 MW.

Since the FiT register does not specify if a site is rooftop PV or ground PV, rooftop PV sites were identified as any site below 50 kW. A total of 2,644 sites below were identified, with a combined capacity of 11.4 MW. The FiT register has only logged participants that signed up to the scheme and ceased taking new applications in 2019. It is therefore an underestimation of the current (2025) capacity.

The FiT register also included one hydroelectric site with a capacity of 0.026 MW.

The most recent publication of the Energy Generation in Wales, for year 2022, (Welsh Government, 2023) reported an onshore wind capacity of 34 MW, supporting the value estimated in this study. However, in Energy Generation in Wales 2022, the existing solar PV capacity was reported as 80 MW (31 MW higher than the estimated in this study). In coming to this figure, the study performed a corroboration of all public renewable datasets, gained access to some non-public datasets, and held engagements with utilities, installers and industry organisations. The study is considered a comprehensive source of renewable capacities, so to avoid underestimating the existing capacity, the higher figure from Energy Generation in Wales has been used. Since ground solar PV sites are likely to be included in the REPD (provided they are above 150 kW), and that the FiT dataset (which was used to find the rooftop PV capacity) will not contain any PV installations post 2019 (and therefore expected to be an underestimation), the 31 MW of additional solar PV has been assumed to be entirely rooftop PV (42.9 MW when combined with the 11.4 MW identified from the FiT register).

The Energy Generation in Wales 2022 report also included several other capacities which were not found in our review of public datasets – see below. These capacities have been included in our estimate of existing, operational capacity (see Table 3-1):

- 2 hydropower electric sites with no capacity listed
- 1 biomass CHP site with a capacity of 1 MW_e
- 1 energy from waste site with a capacity of 1 MW_e
- 1 Sewage gas site with a capacity of 1 MW_e and 1 MW_{th} *
- 61 biomass sites with a combined capacity of 8 MW_{th}
- 164 solar thermal sites with a combined capacity of 1 MW_{th}.
- 1 Landfill gas site with unknown capacity

*This has been assumed to be the Gowerton sewage gas (wastewater anaerobic digestion) CHP which is listed in the Ofgem Renewables & CHP register to have a capacity of 0.2 MW_e. As site specific data is available from Ofgem, the 0.2 MW_e capacity has been chosen for our assessment.

Further information on the sites identified and corroboration between datasets is provided in Appendix B – Details on Renewable Dataset Corroboration.

3.2 Existing Installed Capacity

A summary of the existing, operational renewable capacities is presented in Table 3-1 below.

Technology (power)	Installed capacity (MW_e)	Assumed capacity factor	Estimated annual power generation (MWh_e/yr)
Wind (onshore)	34.0	27%	80,900
Solar PV (ground mounted)	37.1	10%	32,520
Solar PV (roof mounted)	42.9	10%	37,550
AD (wastewater) (CHP electricity)	0.2	50%	920
Hydropower	0.03	50%	110
Energy from waste	1.0	90%	7,880
Biomass CHP	1.0	90%	63,070
Totals	**116.2**	-	**222,950**
Technology (heat)			
AD (wastewater) (CHP heat)*	0.2	50%	1,050
Biomass heat only	8.0	50%	35,040
Solar thermal	1.0	20%	1,750
Totals	**9.2**	-	**37,840**

**For AD generation that is marked as CHP enabled (as determined from REPD), the potential heat recovery (MWth) is estimated from the provided installed capacity (MWe). It is assumed that the generation has a 35% electrical efficiency and 40% heat recovery.*

Table 3-1: Existing Renewable Generation Capacity in SC

3.3 Installed Capacity (Under Development)

In addition to the existing, operational capacity, we have assessed renewable projects "under development" which are defined as those in construction or with planning permission granted. If a planning application for a site has been submitted, but is yet to receive a decision, it will not be included in our results below.

The Toolkit suggests that only large sites should be included in the review of under development capacity (Welsh Government, 2015). Only schemes with a proposed installed capacity of greater than 150 kW are included and shown in Table 3-2 (as this is the minimum size reported in the REPD). As the following schemes are "under development", it is possible that this capacity may not successfully materialise.

Technology type	Site name	Proposed installed capacity (MW_e)	Assumed capacity factor	Estimated annual energy generation (MWh_e/yr)
Solar PV (ground mounted)	Tir John Solar Farm	3.0	10%	2,630
	Carn Nicholas Farm (Extension)	10.0		8,760
	Penyfodau Fawr Farm	44.0		38,540
Solar PV (roof mounted)	Eurofoods Building	0.6		530
	Brunel Way, Pentrechwyth	0.7		610
Total proposed power generation (MW_e)		**58.3**	-	**51,070**

Table 3-2: Proposed Renewable and Low Carbon Energy Projects in SC

3.4 Comparison to Swansea LAEP

The Swansea LAEP analysis was conducted in 2023 and reviewed the REPD and FiT register for determining a baseline renewable capacity, and no other datasets. As a result, the onshore wind and solar PV capacities estimated in the LAEP are lower values than this study. The onshore wind capacity identified in this study (34.2 MW) is 1.2 MW higher than the figure reported in the Swansea LAEP. This can be attributed to the Swansea LAEP not including sites listed in the FiT register, which contained two onshore wind sites totalling 1.2 MW.

Existing ground PV capacity was reported to be 36 MW in the LAEP, but this study found 37.1 MW, the difference thought to be due to a more up to date version of the REPD. This study used the Energy Generation in Wales 2022 report to estimate a rooftop PV capacity (42.9 MW), whereas the LAEP reports a much smaller capacity due to the use of the FiT register.

An update on the LAEP was provided to the Council's Cabinet on the 16 May 2024. The Cabinet Member for Service Transformation submitted an information report relating to the final content of Swansea's LAEP.

4 References

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5 Appendices

5.1 Appendix A – Energy Projections Mapping

Energy category	DESNZ subnational final energy	DESNZ energy & emission projections
Electricity	Electricity: Domestic Electricity: Industrial, Commercial and other	Residential: Electricity Commercial Services: Electricity Public Services: Electricity Agriculture: Electricity Iron & Steel: Electricity Other Industry sectors: Electricity Transport: Electricity
Heating fuels	Coal: Domestic Coal: Industrial Coal: Commercial Coal: Public Sector Coal: Agriculture Manufactured fuels: Domestic Manufactured fuels: Industrial Petroleum: Industrial Petroleum: Commercial Petroleum: Domestic Petroleum: Public sector Petroleum: Agriculture Gas: Industrial, Commercial & other Gas: Domestic Bioenergy & wastes: Domestic Bioenergy & wastes: Industrial and Commercial	Residential: Natural gas Residential: Petroleum products Residential: Renewables Residential: Solid/manufactured fuels Commercial Services: Natural gas Commercial Services: Petroleum products Commercial Services: Renewables Commercial Services: Solid/manufactured fuels Public Services: Natural gas Public Services: Petroleum products Public Services: Renewables Public Services: Solid/manufactured fuels Agriculture: Natural gas Agriculture: Petroleum products Agriculture: Renewables Agriculture: Solid/manufactured fuels Iron & Steel: Natural gas Iron & Steel: Petroleum products Iron & Steel: Renewables Iron & Steel: Solid/manufactured fuels Other Industry sectors: Natural gas Other Industry sectors: Petroleum products Other Industry sectors: Renewables Other Industry sectors: Solid/manufactured fuels
Transport fuels (road and rail)	Coal: Rail Petroleum products: Road transport Petroleum products: Rail Bioenergy and wastes: Road transport	Transport: Natural gas Transport: Petroleum products (rail) Transport: Petroleum products (road transport) Transport: Renewables Transport: Solid/manufactured fuels

Table 5-1: Mapping of DESNZ subnational energy data to energy projections

5.2 Appendix B – Details on Renewable Dataset Corroboration

- Onshore Wind: Onshore wind sites were taken from the REPD, Ofgem Renewables Register, Ofgem FiT register, and planning data. In total four sites were identified totalling 34.2 MW, all of which are operational sites. The largest site was corroborated against SC data, with a capacity of 32.8 MW (Note: The SC planning data reported a maximum built capacity of 48 MW for this site, it was assumed the value reported in the REPD reflected the final built capacity). One site was identified via the Renewables & CHP Register with a capacity of 280 kW and two sites in the FiT register with a combined capacity of 1.1 MW.
- Ground Solar PV: Ground solar PV sites were identified using the same sources. Of the twenty-two sites, nineteen are operational sites totalling 37.1 MW and three planned developments with a capacity of 57 MW. Ten sites were included in the REPD and Ofgem Renewables Register, seven of which corroborated in the SC planning dataset. The FiT register does not specify if an entry is ground or roof solar PV, but 10 sites were assumed to be ground PV based on their large capacities. Of the 57 MW of planned ground solar PV, the single site approved under the Development of National Significance procedure has a capacity of 44 MW.
- Rooftop Solar PV: Rooftop PV installations are likely to fall under permitted development and so would not be included in the SC planning data. Two planned developments were identified in the REPD with a combined capacity of 1.3 MW. Operational rooftop solar PV was identified using the FiT register. The FiT register does not explicitly state whether a scheme is rooftop or ground mounted and so an estimate of small-scale rooftop PV capacity was determined by assuming that anything 50 kW or below is rooftop and anything above is ground mount. Of the 2,655 schemes listed, only 11 sites had a capacity greater than 50 kW (all of which were non-domestic sites), and 2,460 sites (2,443 domestic and 17 non-domestic) had capacities less than 5 kW, suggesting that most schemes in this register are rooftop PV. The sum of schemes below 50 kW in the FiT register amounted to 11.4 MW, with 9.6 MW of that being listed as domestic applications.
- Corroboration against Energy Generation in Wales, 2022: Regen was commissioned by Welsh Government to produce a series of reports exploring the extent of renewable capacities across Wales, the latest of which is representative of the capacities in 2022 (Welsh Government, 2023). In doing this, they performed a corroboration of all public renewable datasets, gained access to some non-public datasets, and held engagements with utilities, installers and industry organisations. Energy Generation in Wales is therefore considered a comprehensive source of renewable capacities, but it was published in 2023 (for year 2022) and so will be missing any renewable projects developed between the time of their assessment and this study. Despite this, the capacity of existing onshore wind estimated in this study of 34.2 MW is the same value reported in Energy Generation in Wales 2022. However, the existing solar PV capacity estimated in this study of 48.5 MW (37.1 MW ground solar PV and 11.4 MW of roof solar PV) is significantly lower than the value reported in Energy Generation in Wales 2022 (80 MW) which is thought to be due to the development of sites after the FiT register ceased taking applications in 2019. To avoid underestimation of the renewable capacity in SC, the higher capacity solar PV reported in Energy Generation in Wales 2022 is used in our results.

Site name	Capacity (MW)	Source of information	Assumptions and corroboration performed
Mynydd Y Gwair Wind Farm	32.8	REPD	SC data reported 48 MW. 32.8 MW assumed to be correct
Swansea Docks 1-D	0.3	Ofgem Renewables Register	No corroboration possible, not listed in REPD or SC
FiT Register Sites (several)	1.1	Ofgem FiT Register	No corroboration possible, not listed in REPD, Ofgem Renewables Register or SC

Table 5-2: Corroboration of Onshore Wind Developments

Site name	Type of array	Capacity (MW)	Source of information	Assumptions and corroboration performed
Abergelli Glas Solar Farm	Ground PV	7.7	REPD	SC data reported 12.7 MW. 7.7 MW assumed to be correct
Brunel Way, Pentrechwyth - Solar Panels	Roof PV	0.7	REPD	No corroboration possible, not listed in Ofgem Renewables Register or SC data
Brynwhilach Solar Park	Ground PV	4.1	Ofgem Renewables Register	REPD reported 4.0 MW. 4.1 MW assumed to be correct
Carn Nicholas Farm	Ground PV	5.0	REPD	Corroborated against by SC data
Carn Nicholas Farm (Extension)	Ground PV	10.0	REPD	
Cockett Valley	Ground PV	4.0	REPD	
Eurofoods Building	Roof PV	0.6	REPD	No corroboration possible, not listed in Ofgem Renewables Register or SC data
Gelliwern Isaf Farm	Ground PV	6.0	REPD	Ofgem Renewables Register reported 5.0 MW. 6,0 MW assumed to be correct
Killan Farm Solar Array Extension	Ground PV	1.0	REPD	Corroborated against by SC data
Land Adjacent to RSPCA Llys Nini	Ground PV	0.8	Ofgem Renewables Register	No corroboration possible, not listed in REPD or SC data
Penyfodau Fawr Farm	Ground PV	44.0	Developments of National Significance	No corroboration possible, not listed in REPD, Ofgem Renewables Register or SC data
Rhyd-y-Pandy Solar Farm	Ground PV	6.0	REPD	SC data reported 7 MW. 6 MW assumed to be correct
Tir John Solar Farm	Ground PV	3.0	REPD	Corroborated against SC data
FiT Register Sites	Roof PV	11.4	Ofgem FiT Register	No corroboration possible, not listed in REPD, Ofgem Renewables Register or SC data
FiT Register Sites	Ground PV	2.5	Ofgem FiT Register	No corroboration possible, not listed in REPD, Ofgem Renewables Register or SC data

Table 5-3: Corroboration of Solar PV Developments