Report for:	**Scrutiny**
Date of Meeting:	28th October 2024
Subject:	Solar Panel Farms and Anaerobic Digesters - quantity of sites and land use
Cabinet Member:	Councillor Steve Keable, Cabinet Member for Planning and Economic Regeneration and Councillor Natasha Bradshaw, Cabinet Member for Environment and Climate Change.
Responsible Officer:	Richard Marsh, Director of Place and Economy
Exempt:	Not Applicable
Wards Affected:	All
Enclosures:	N/A

Section 1 – Summary and Recommendation

This report is produced following the request of the Scrutiny committee to receive a report on Solar Panel Farms and Anaerobic Digesters and, specifically; *"To receive a report regarding Solar Panel Farms and Anaerobic Digesters looking at the quantity of sites and how much land was devoted to renewable energies"*

Building on discussions at recent meetings, including at the September Scrutiny committee, the report has also been developed to include consideration of, and scope for, wind power within the District. This is particularly pertinent given changes to Planning Policy which are reversing an effective moratorium on on-shore wind farms.

Recommendations:

1. That Members note the report.

Section 2

1. Report

1.1. A report presented to the Environment Policy Development Group in January 2024 identified relevant information in relation to this topic and, although it is not proposed to repeat the content of that report through this report, the following information/statistics on renewable energy installations within Mid Devon provide useful context:

Table 1. Renewable Energy – Number of Installations in Mid Devon.

Photovoltaics	Onshore Wind	Hydro	Anaerobic Digestion	Sewage Gas	Landfill Gas	Plant Biomass	Total
4,963	37	2	10	1	1	1	5,015

Table 2. Renewable Energy Installed Capacity (MegaWatts) in Mid Devon.

Photovoltaics	Onshore Wind	Hydro	Anaerobic Digestion	Sewage Gas	Landfill Gas	Plant Biomass	Total
63.3	1.2	0.1	5.3	0.0	4.9	0.3	75.1

Source: Regional Renewable Statistics (www.gov.uk).

1.2. In addition to this, the January report also references a 2018 'Low Carbon and Climate Change evidence base' report produced for Mid Devon and partner Devon authorities by the University of Exeter. See here: (UoE 2018 Low Carbon report). This document is interesting and helpful as whilst it does not discuss Anaerobic Digester plants in any great detail, it does discuss and identify opportunities for Wind and Solar installations within Mid Devon.

1.3. In terms of Wind generation, and noting that the report dates from 2018, the report identifies that Mid Devon had, at that time, just 34 identified wind-power generating locations with annual output of 1.027 Gwh.

1.4. By contrast, and as demonstrated by the table below (table 3), the report also identified that, accounting for Grid constraints, the District had 117 potential sites with annual output capacity of 244.3 Gwh.

Table 3: Unexploited wind potential amongst selected Devon Authorities

Local authority	Number of sites	Capacity (MW)	Annual Output (GW h)
Without grid constraint			
East Devon	42	34.8	85.4
Exeter	1	0.5	1.2
Mid Devon	400	324.5	796.1
Teignbridge	194	115.4	283.2
Total	**637**	**475.2**	**1165.9**
With grid constraint			
East Devon	11	13.3	32.7
Exeter	1	0.5	1.2
Mid Devon	117	99.5	244.3
Teignbridge	128	80.9	198.6
Total	**257**	**194.2**	**476.7**

1.5. Indeed, the report goes on to state that wind power generation (in 2018) generated just 0.4% of the grid constrained resource – i.e. that actual generation from wind power was very significantly below potential generation levels.

1.6. It is interesting to note that the recent data from BEIS (reported in January, Tables 1 and 2 in this report) shows only a marginal difference in output versus the 2018 UoE data and, as such, it is reasonable to assume that this potential remains significantly untapped – probably owing to the restrictions on new on-shore wind facilities that have existed in the recent past.

1.7. The position in relation to Solar power is not entirely dissimilar to that of Wind with the University of Exeter data demonstrating relatively small amounts of solar provision relative to the potential for development and generation.

1.8. The data contained within the 2018 UoE report is drawn from BEIS data in 2016 and reports that 37.7Mw of constructed solar capacity existed in Mid Devon generating annual output of 35.2 GWh. This is contrasted to capacity which, assuming a 2km constraint on distance from Grid and excluding Grade 3a agricultural land (or better), is assessed at totalling 1032.2 MW within Mid Devon with a forecast annual output of 994.6 GWh.

1.9. Comparing this with the data reported to the Environment PDG in January it demonstrates that despite a significant growth in constructed capacity in solar array (rising to 63.3Mw from 37.7Mw), significant further capacity exists (in theory) to further expand solar capacity within the District.

1.10. Of course it is fully acknowledged that this data does not fully account for other land-use pressures, including the existing use of land for food production etc, but it does suggest significant potential and it is interesting to note that some barriers to delivery are noted by the report – including best and most versatile agricultural land.

1.11. Furthermore, the figures do also resonate with a recent report produced and published by the Friends of the Earth and University of Exeter (available here)

which suggests that 674 GWh of energy could be produced using just 1.3% of the total area of Mid Devon.

1.12. Again, the data in this report suggests that current solar and wind generation in Mid Devon is currently producing just 59GWh (broadly comparable to BEIS data sets) – which could also be further extrapolated to suggest that less than around 0.13% of land is currently in use for either solar or wind power generation within Mid Devon at this time.

1.13. It may be that the presence of solar arrays in particular can feel to be more significant in terms of their land use owing to the fact that such arrays are often located close to major infrastructure routes where power lines often co-exist and that, as such, they are more prominent and visible and the sense of their occupation of land can be over-inflated versus reality – i.e. where ribbons of solar development can sometimes follow major road routes.

1.14. In terms of AD (Anaerobic Digester) plants, data suggests that 10 facilities currently exist within Mid Devon although the nature of these plants will vary from small on-farm plants to more major 'industrial' operations. The Data also suggests that these produce 5.3 MW of energy output. However, whilst the number and output of these sites is known, the land take associated with these varies according with the nature of the plant and the output generated. Whilst some plants are 'tied' in terms of the land from which they can draw feed-stocks, it would be a complex task to fully determine and detail where all feedstocks/inputs are drawn from and what current land-take these involve.

1.15. Furthermore, whilst some AD plants operate effectively without issue or complaint, it is noted that some operations do attract complaints and that proposals for new plants are often met with concerns from local residents – more often that not in relation to vehicle movements and especially from larger vehicles (tractors and HGVs).

2. Conclusion

2.1. Although prominent at times, Solar, AD and Wind installations within Mid Devon currently only occupy a small amount of land and significant potential exists for further development of new installations in order to generate low carbon energy for the District/region.

2.2. It is recognised that different approaches to energy production have different impacts upon our natural environment and upon our residents and it will therefore be important to consider this in future when considering further developments and policies to support (or defend against) proposals.

2.3. However, generally speaking, although impacts do exist from such developments, analysis has previously demonstrated that it is possible to identify preferable locations for such installations which would avoid major unacceptable impacts upon communities, landscapes and the wider natural environment and which would achieve necessary technical requirements in order to allow them to function.

2.4. Further work to identify future opportunities for, and policies to support, low carbon energy generation sites will be undertaken. This work will progress, in part, through the new Local Plan and, noting the information contained within this report, Members are therefore asked to continue to engage in this work stream to shape how low-carbon, renewable energies can be developed within the District and through the new Local Plan/its supporting evidence base.

Financial Implications

There are no direct financial implications arising from this report.

Legal Implications

No direct legal implications arise from this report.

Risk Assessment

No specific risks are considered to arise from this report.

Impact on Climate Change

No policy changes or developments are proposed through this report which have an impact on Climate Change – but the content of the report is obviously highly significant in terms of appreciation of issues relating to renewal energy generation and, as such, Members are asked to note the report.

Equalities Impact Assessment

Not applicable

Relationship to Corporate Plan

Development of, and enhancement to, local and sustainable energy generation initiatives will support the Council in achieving its Carbon objectives and in delivery the Corporate Plan. Potential opportunities are particularly valuable where these will support the production of low-cost renewable energy which can support our residents and guard against fuel poverty and an unjust energy transition.

Section 3 – Statutory Officer sign-off/mandatory checks

Statutory Officer: Andrew Jarrett
Agreed by or on behalf of the Section 151
Date: 17 October 2024

Statutory Officer: Maria de Leiburne
Agreed on behalf of the Monitoring Officer
Date: 17 October 2024

Chief Officer: Richard Marsh, Director of Place and Economy
Agreed by or on behalf of the Chief Executive/Corporate Director

Date: 14th October 2024.

Performance and risk: Steve Carr
Agreed on behalf of the Corporate Performance & Improvement Manager
Date: 17/10/2024

Cabinet member notified: Yes

Section 4 - Contact Details and Background Papers

Contact: Richard Marsh, Director of Place and Economy. rmarsh@middevon.gov.uk

Background information