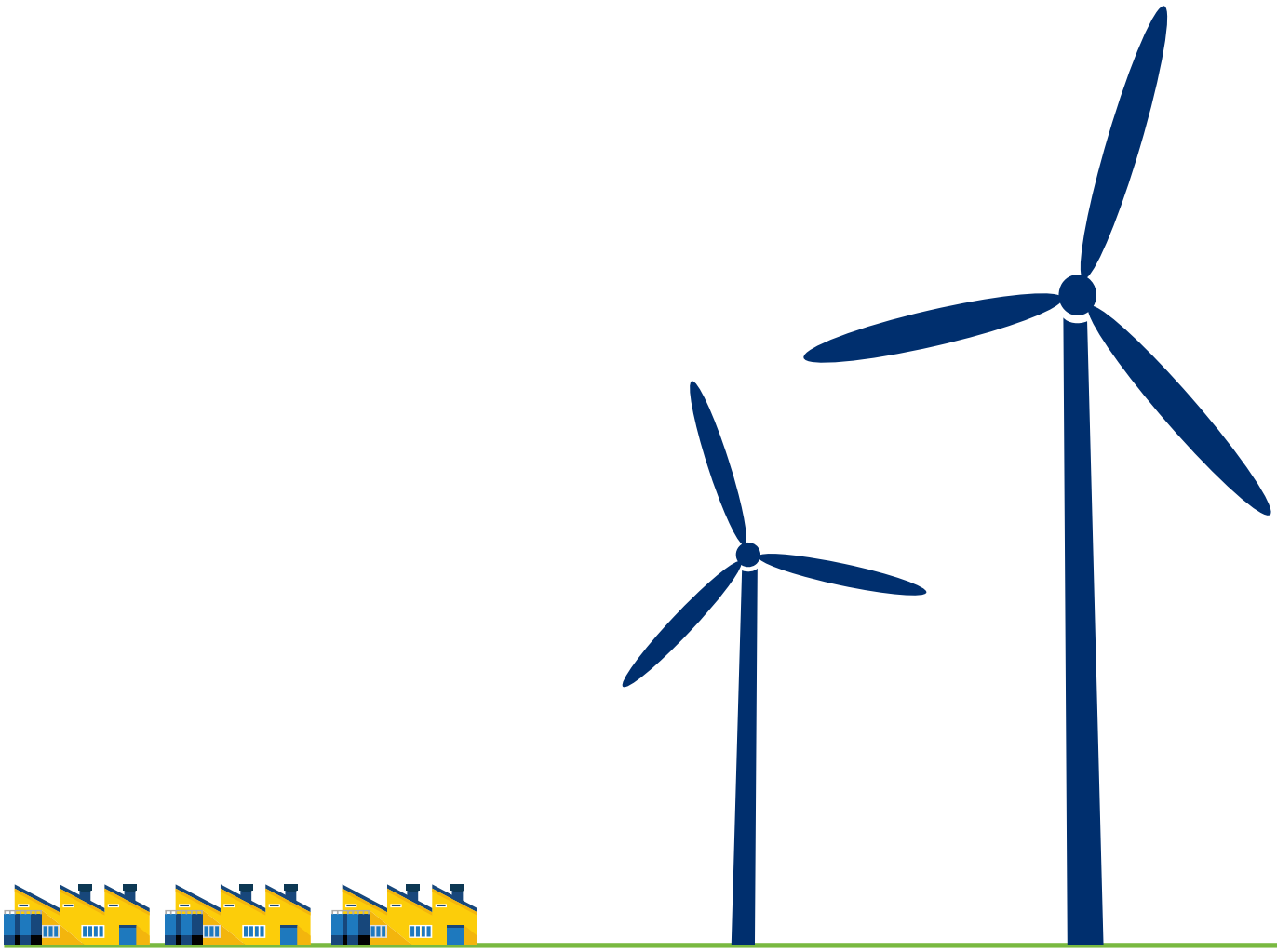
Blaenau Gwent County Borough Council

Renewable and low carbon energy assessment 2020

Non-technical summary



Non-technical summary

A vision for the future of Wales

Tackling climate change and creating a thriving, clean economy are themes at the centre of the Welsh Government's vision for the future in Wales[1]. The challenge of meeting national and international climate targets creates an opportunity for people living and working in Wales to benefit from a greener, healthier and fairer society. To turn this vision into reality, the Welsh Government has introduced ambitious legislation, policies and targets for reducing greenhouse gas emissions and generating renewable energy. Local authorities have a significant role to play in helping Wales move towards this vision, through the plans and policies that they put in place at a local level.

Welsh legislation and policy

The Well-being of Future Generations (Wales) Act 2015 and the Planning (Wales) Act 2015 are laws which focus on social, environmental, economic and cultural well-being and, along with other legislation, guide sustainable development principles in Wales. Under the Environment (Wales) Act 2016, Wales is required to reduce greenhouse gas emissions by at least 80% by 2050, with future regulations planned to reduce emissions by 95%.

Wales also has specific targets for renewable energy generation and locally owned energy projects:

Wales to generate electricity equal to **70%** of its consumption from renewable sources by 2030

1GW of renewable electricity and heat capacity in Wales to be locally owned by 2030

New energy projects to have at least an element of local ownership from 2020

'Local owned energy installations' refer to '*energy installations, located in Wales, which are owned by one or more individuals or organisations wholly owned and based in Wales, or organisations whose principal headquarters are located in Wales*'.[2]

Achieving Welsh Government's ambitious targets requires activity from all sections of society and the economy. The energy efficiency of our buildings will need to be improved and supportive planning policy will be required to encourage deployment of all scales of renewable energy across the country. All local areas will need to contribute to achieving the targets by hosting renewable energy developments, encouraging local investment and promoting decarbonisation and energy efficiency at a local level.

Wales consumed 14,860 GWh of electricity in 2017. The Renewable and Low Carbon Energy Assessment estimates that **existing renewable electricity generators in the study area generate approximately 53 GWh p.a. of electricity; the equivalent of 0.5% of the Welsh Government's national 70% of electricity consumption target from renewable sources.** The 'study area' for this assessment covers all areas of Blaenau Gwent outside of the Brecon Beacons National Park.

The assessment also estimates that **28 MW of renewable and low carbon energy generation (heat and electrical) is already installed in the study area. If 50% of this existing generation is locally owned this would be equivalent to 1% of the Welsh Government's 1 GW local ownership target.**

[1]Prosperity for all: A low carbon Wales, Welsh Government, 2019
[2]Policy statement – Local ownership of energy generation in Wales – benefitting Wales today and for future generations, 2020

The land use planning system

The planning system is in place to ensure that land in Wales is developed and used in line with Welsh legislation. Planning Policy Wales (edition 10, 'PPW 10') sets out the Welsh Government's land use planning policies which contribute to sustainable development.

PPW 10 requires planning authorities to collect evidence to inform their policies on renewable energy and low carbon energy as part of their Local Development Plans (LDP). The Welsh Government has published a standard methodology for collecting this evidence, known as 'the Toolkit'[3]. Whilst the Toolkit gives clear guidance on creating this 'evidence base', PPW 10 also states that this standard approach should be adapted to take account of local issues and to maximise the opportunities for generating renewable energy.

A renewable energy assessment for Blaenau Gwent County Borough Council

Blaenau Gwent County Borough Council (BGCBC) has commissioned the Carbon Trust to complete this renewable and low carbon energy assessment to provide an evidence base to inform their Replacement Local Development Plan 2018-2033.

This evidence base aims to:

- Estimate the potential renewable energy resource within the study area (across different technologies) to provide focus when setting local policy and targets
- Identify where the potential renewable energy resource and heating energy demand is located to understand where developments may emerge and to steer developments and investments to the most appropriate locations (from both a technical and planning perspective)
- Communicate the scale of the challenge and the need for supportive planning policy
- Make informed recommendations regarding design and layout of new development.

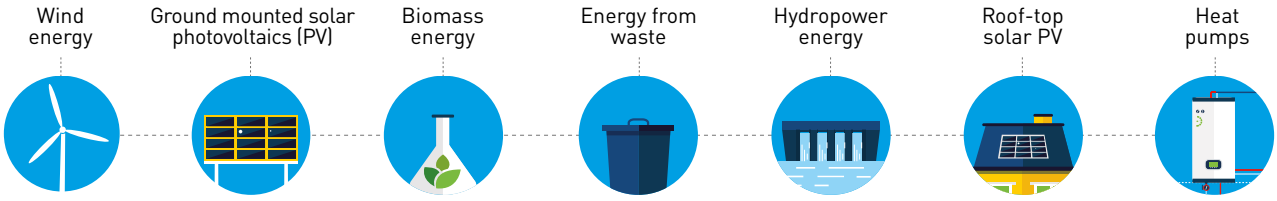
This study was commissioned alongside renewable and low carbon energy assessments for four neighbouring local planning authorities; Newport City Council, Torfaen County Borough Council, Caerphilly County Borough Council and Monmouthshire County Council.

The methodology for creating the evidence base

The methodology for this assessment has been guided by the Welsh Government's Toolkit and, where appropriate, has been adapted to ensure that it is relevant to BGCBC. First, the current and future demands for energy for heat, electricity and transport have been estimated for the study area. Next, the extent to which these energy demands have been met from local renewable and low carbon energy sources has been calculated. Finally, the potential for new renewable and low carbon energy developments has been assessed.

[3]Practice Guidance: Planning for Renewable and Low Carbon Energy – A Toolkit for Planners, Welsh Government, 2015

The assessment considered the potential for:

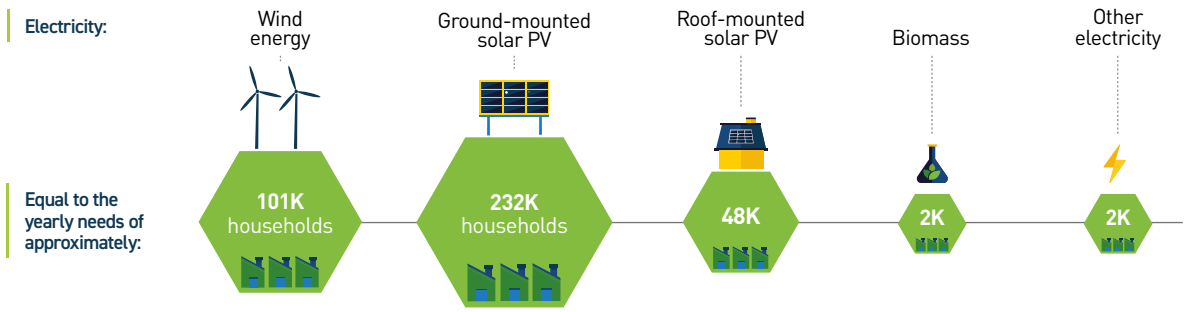


Opportunities for district heat networks are also evaluated.

Results of the renewable energy assessment

The results show that there is significant wind and solar resource potential in the area. Whilst relatively low potential for district heat networks is identified, there is some potential for district heat networks near to an existing heat network in Ebbw Vale and at the new RLDP strategic development sites.

The assessment identified the following renewable energy resource potential in the Blaenau Gwent study area:



In theory, there is sufficient resource to meet approximately 89% of the area's current (2017 – the latest published data) energy needs from locally generated renewable or low carbon energy. In practice, the opportunities may be restricted by local and national energy infrastructure ('grid capacity'), competition with other land uses and issues such as landscape impact. Additional energy generated in other parts of the country and offshore may, therefore, also be needed to meet the area's future energy needs.

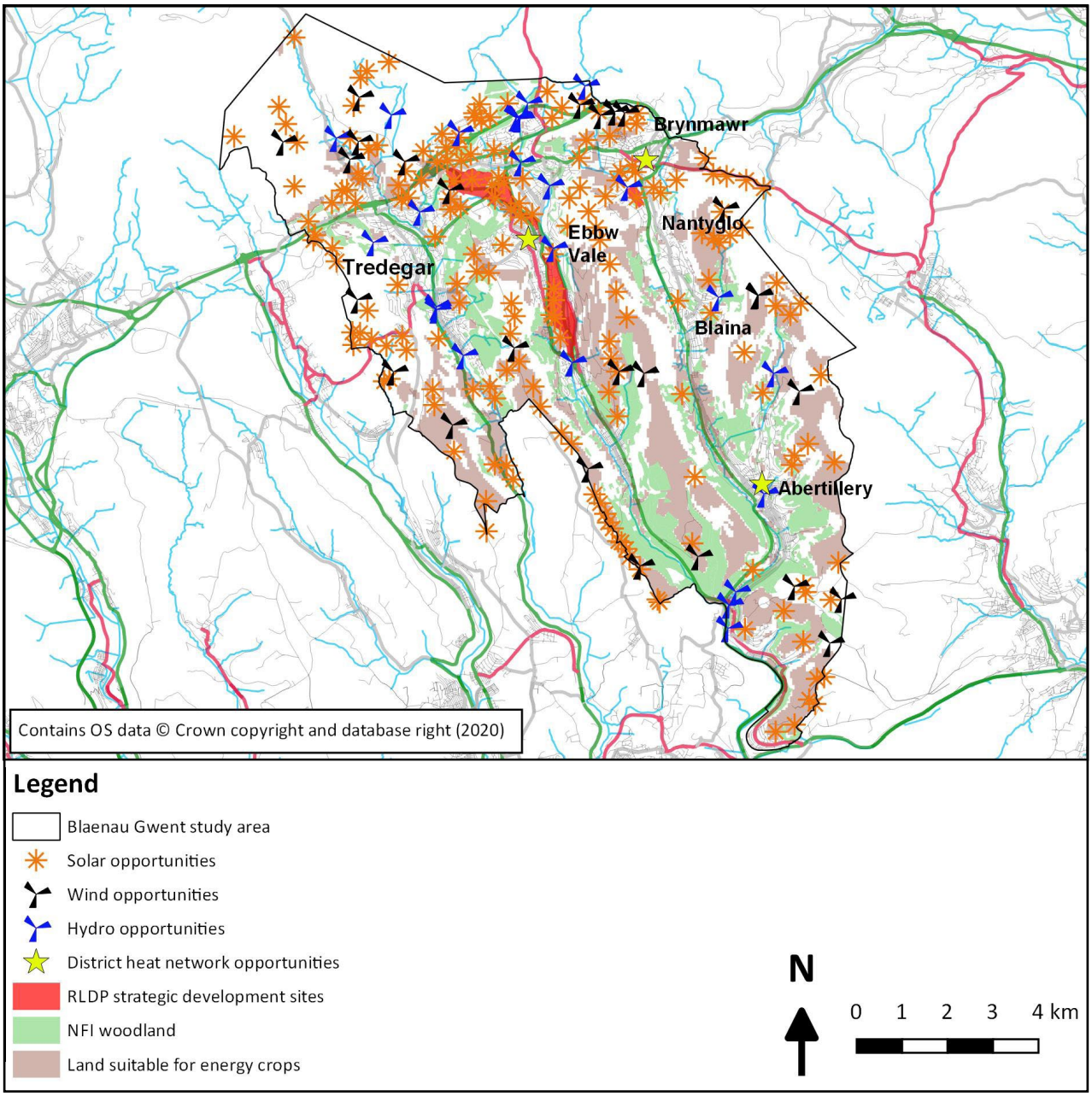
The assessment identifies potential for 1.4 GW of renewable energy capacity (heat and electricity) resource within the Blaenau Gwent study area: more than 50 times greater than is currently installed.

If only 10% of the potential resource capacity was developed under local ownership, this would be equivalent to 14% of the Welsh Government's 1 GW local ownership target. If the 1 GW local target is shared out across local authorities by population, Blaenau Gwent's share would be equal to 22 MW (10% of the potential resource capacity would be more than six times greater than this).

The potential electricity generating assets are estimated to generate the equivalent of approximately 11% of the Welsh Government's national 70% of electricity consumption target from renewable sources (based on 2017 consumption values). With respect to local demand, the potential energy generation assets could theoretically generate approximately 90% of its current total energy demand (electricity, non-electric heat and non-electric transport), excluding heat pump generation, and approximately 4.4 times its current electricity demand, although it is unlikely that all resource will be exploited due to grid constraints, land use competition, etc.

The results are shown spatially on an energy opportunities map in Figure 1.

Figure 1: Energy opportunities map



Policy recommendations

The policy recommendations arising from this assessment focus on ways to reduce carbon emissions in

Blaenau Gwent and support achievement of national renewable energy and carbon targets. The LPA will need to consider these recommendations alongside other objectives of the Replacement Local Development Plan (RLDP) when finalising the RLDP's exact policy wording.

Targets

Adopt ambitious local renewable energy targets.

Repowering

Adopt positive policies regarding the repowering of existing renewable generation assets when they reach the end of their current planning consents.

Local search areas

Identify preferred, broad, geographical areas for development of solar PV and onshore wind (termed in the assessment "Local Search Areas"), taking into account the renewable energy resource available, land use and landscape value, in order to sign-post developments to the areas considered most appropriate. These broad areas will be identified in the RLDP, following further consideration by the LPA, but will be informed by the assessment undertaken. Figure 2 identifies the less constrained areas recommended to be considered for inclusion within the broad areas identified for Local Search Area designation.

New developments

Review building regulations in place when the RLDP is due to be adopted and consider whether higher standards can be required, ensure that energy use is sufficiently considered within planning applications, and consider requiring post-occupancy monitoring to be carried out to evidence that design standards are achieved in practice, if not required by building regulations.

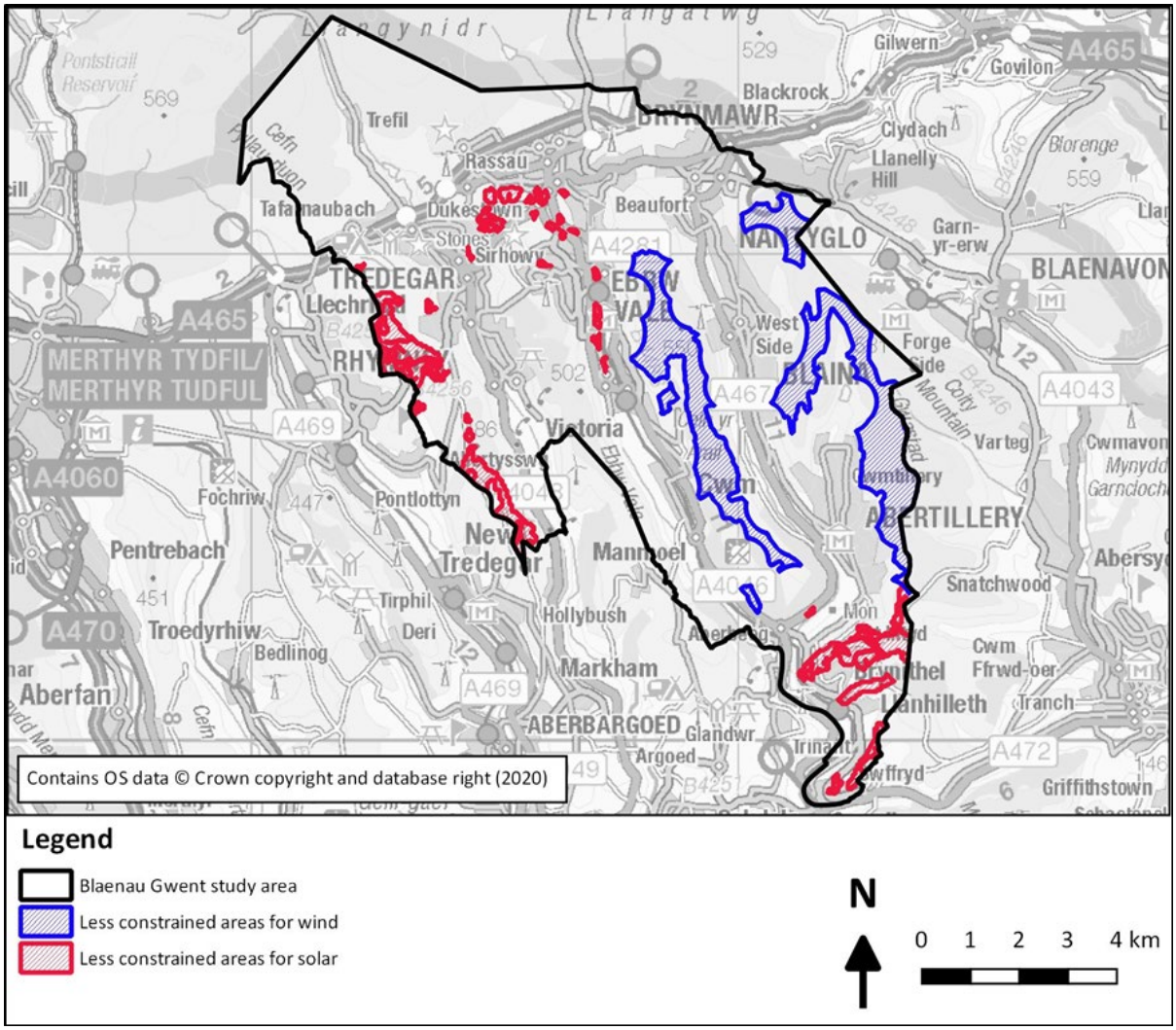
Low carbon heating

Discourage new developments from connecting to the gas network and encourage low carbon heating systems to be installed if not required by building regulations. At the very least new developments should be built so that they are compatible with low carbon heating systems.

District heat networks

Whilst limited potential for district heat networks has been identified, priority areas for district heating could be designated, with developers required to formally consider the potential for heat network development in these areas. Any new district heat networks should be designed so that they are suitable for integration with lower temperature heat generation systems (e.g. solar thermal and heat pumps).

Figure 2: Recommended areas to include within Local Search Areas



In addition to the planning policy recommendations provided above, BGCBC can demonstrate leadership by:

- Developing and investing in additional renewable energy and energy efficiency projects on BGCBC's (or other stakeholders') own estate
- Ensuring that renewable energy generation from waste is secured through any new waste management contracts
- Sharing learning from any BGCBC decarbonisation projects with others (private and public sector)
- Acting as an enabler for energy systems innovation, allowing new innovations to be trialled within Blaenau Gwent
- Committing to building any new council developments to the highest energy efficiency and environmental standards, consistent with BGCBC's climate action commitments and policy
- Managing organisation operations in the most energy efficient manner (through staff training)
- Ensuring that climate change impact and sustainable development is considered throughout all procurement activities.

What happens next?

The Renewable and Low Carbon Energy Assessment has made policy recommendations that will support decarbonisation of the area's energy and building sectors. The Next Steps are for BGCBC to consider the recommendations provided in this assessment alongside the other requirements of the RLDP, for example economic and housing requirements, to determine how to implement the recommendations within the RLDP. This process would benefit from gaining insight from additional stakeholders before the RLDP is finalised.

Before identifying Local Search Areas for wind and solar developments, BGCBC may wish to undertake further refinement of the areas identified.

To progress their leadership role in tackling climate change and pursuing their own projects BGCBC could evaluate the less constrained areas identified for wind and solar against their land holdings and consider whether to progress with developing their own sites, or advertising them for others to develop.

The final output from this assessment will be clear evidence-based policies to support the decarbonisation of Blaenau Gwent (and Wales) adopted within the BGCBC Replacement Local Development Plan 2018-2033.

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