



Machynlleth & Llanbrynmair

Energy Local Opportunities in Powys

The Green Valleys CIC

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The Machynlleth and Llanbrynmair Energy Zone

1. Description

This consists of two substation area. The western area includes the town of Machynlleth, settlements to north and south alongside the A487 and a large area of upland moor and forestry. The upland areas to the north are within Gwynedd and parts of the southern uplands and Dyfi estuary are in Ceredigion.

The eastern area contains the settlements along the A470, and the catchments of the river Twymyn and the upper Dyfi river valley.

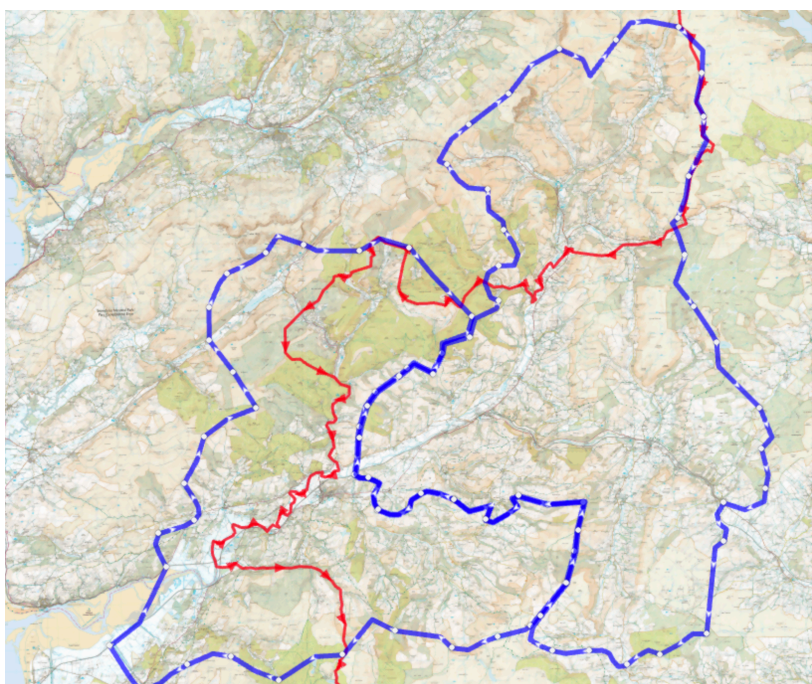


Figure 1 – Machynlleth & Llanbrynmair energy zone map

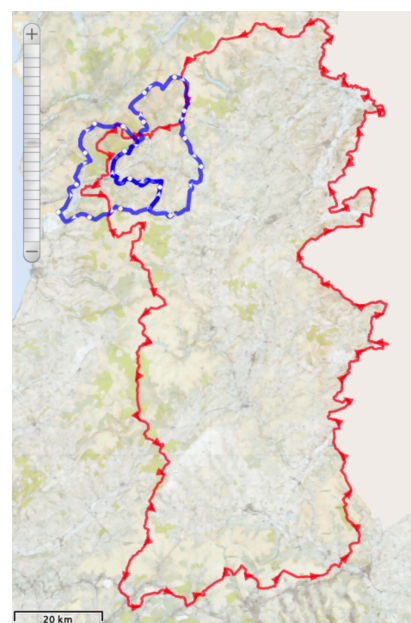


Figure 2 - Powys map

2. Potential viability of an Energy Local Club

There are only a limited number of generators within these two zones and the wind generator is likely too small to supply an Energy Local Club. The hydro generators are relatively large and if a single owner can be engaged then there is certainly capacity to form a Club.

The exact location of the hydro generators cannot be determined from the datasets available and there are extensive upland areas across this zone, which would indicate that there are likely generators available for both east and west areas. If so, there would be potential for at least two clubs to form.

The eastern area is quite sparsely populated and there are a number of small settlements along the A-road network.

Summary of renewable generation in this energy zone

Table 1 - Summary of larger renewable generators in the Machynlleth and Llanbrynmair Zone

	Number of Registered Schemes	Total Installed Capacity	Average Capacity (kW)	Estimated kWh Produced p.a	Approx Number of Homes p.a Equivalent
Hydro	7	268.0	38.3	1,072,000	268
Wind	1	12.1	12.1	24,200	6
PV >4kW	7	98.1	14.0	78,472	20

3. Actions to create a successful Energy Local Club

- Determine the location of the hydro generators through local engagement
- If a generator can be found, form a local group in Machynlleth and/or Llanbrynmair to aid recruitment of approximately 50 Club members
- It is possible that the hydro generators are quite large and so could service an even greater number of consumer members
- To recruit the required number of consumers will likely require significant effort in promotion for the Llanbrynmair area, including some or all of the A-road settlements.
- Machynlleth is likely to have enough potential consumers but this will nevertheless require quite a high uptake in the town.

4. Overall assessment

The potential for Energy Local Clubs in both of these areas would appear to be quite high, as there is likely enough generation from any of the hydro schemes, if a generator can be successfully engaged. Hydro is an ideal renewable source for Energy Local as the period of highest generation match with the periods of highest demand.

It is possible that the generators in these zones will be located in Gwynedd, but would supply energy to communities in both counties. However, it is possible that both generator and consumers could be located entirely in one county or the other.