



Bargoed Farm

Decarbonisation Strategy

Strategaeth Dicarbhoneiddio

[www.bargoedfarm.co.uk](http://www.bargoedfarm.co.uk)



## Who are we? Pwy ydyn ni?

- Caravan & Camping Site with Hot Tubs / Maes Carafanau a Gwersylla
- The Moody Cow Bistro & Farm Shop / Bwyty a Siop Fferm
- The Moody Calf Play Barn / Ysgubor chwarae i blant
- The Moo-tel Holiday Accommodation / Llety Gwyliau
- Barn Wedding & Event Venue / Ysgubor Digwyddiadau a Phriodasau
- Fishing & Wildlife Lake / Llyn Pysgota a Bywyd Gwylt

Bargoed Farm is committed  
to becoming a carbon  
neutral business

Mae Fferm Bargoed wedi  
ymrwymo i fod yn fusnes  
carbon niwtral



# Why? Pam?



# Current Renewable Energy Installation

## Gosodiad Ynni Adnewyddadwy Cyfredol

*Situated on a farm, we have the luxury of space for our renewable energy installations!*

*Wedi'n lleoli ar fferm, mae yna ddigon o le yma ar gyfer ein gosodiadau ynni adnewyddadwy!*

- 300 kW solar PV roof mounted panels / Paneli solar ffotofoltäig
- 450 kW Battery storage / Storfa batri
- 500 kW Biofuel generator / Generadur biodanwydd



# Summer Usage Calculations

## Cyfridiadau Defnydd Haf

- 5 month summer usage / Defnydd haf 5 mis = 400,00 units used
- Approx 80,000 unit kW electric used per month / Defnyddir tua 80,000 uned kW o drydan y mis
- Grid price £0.36 per unit / Pris grid £0.36 yr uned

### **THEORETICAL GRID COST / COST GRID THEORETIGOL**

- $400,000 \times 0.36 = \text{£}144,000$

### **ACTUAL COST / COST GWIRIONEDDOL**

- Biofuel cost = £40,000 + solar + battery (free except for capex fixed cost)

**DIFFERENCE IN COST / GWAHANIAETH = £104,000**



# Winter Usage Calculations

## Cyfrifiadau Defnydd Gaeaf

7 months winter usage = 560,000 units

Defnydd gaeaf 7 mis = 560,000 o unedau

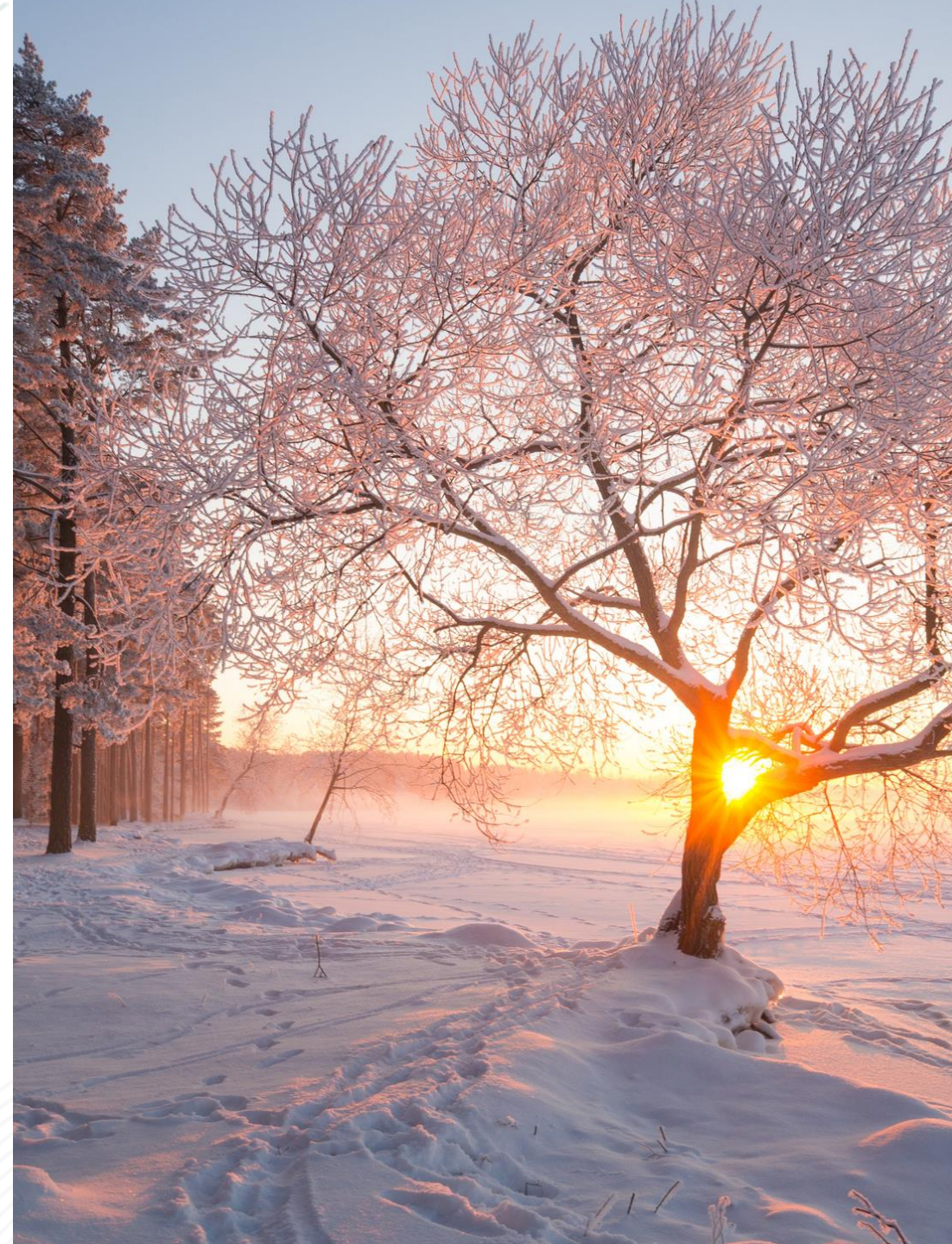
### **THEORETICAL GRID COST / COST GRID THEORETIGOL**

- $560,000 \times \text{£}0.36 = \text{£}201,600$
- Biofuel costs  $\text{£}84,000$  + solar + battery

Difference between theoretical cost and actual  
(expected) cost =  $\text{£}117,600$

Gwahaniaeth rhwng y gost theoretigol a chost  
gwirioneddol =  $\text{£}117,600$

**Annual saving / Arbediad blynyddol =  $\text{£}221,600$**



# Carbon Savings This Year

## Arbedion Carbon Eleni

- 300 kW solar PV panels --> carbon savings of 50,499kg carbon/year
- Paneli PV solar 300 kW --> arbedion o 50,499kg carbon y flwyddyn
- Which is equivalent to planting 2,375 trees
- Cyfwerth a phlannu 2,375 o goed





## Next Phase TBC...

### Camau nesa i'w gadarnhau...

More renewable energy is required to support the next phase of development with the caravan site and hot tub expansion.

Bydd angen mwy o ynni adnewyddadwy i gefnogi cam nesaf, sef datblygiad y maes carafanau.

#### Estimates are as follows / Amcangyfrif:

- |   |               |
|---|---------------|
| • 400kW of battery storage / Storfa batri         | £250,000      |
| • 250kW Solar panels / Paneli solar               | £250,000      |
| • 700kW Noise reduced generator / Generadur tawel | £130,000      |
| • 50Kw x 2 Wind Turbines / x 2 Melyn Wynt         | £250,000 each |

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**Total investment / Cyfanswm y buddsoddiad £1.13m**

# Expected Carbon Savings

## Arbedion Carbon Disgwyliedig

- 250kW solar saves 42,082kg carbon per year
- Which is equivalent to planting 1,979 trees
- Mae'r pŵer solar 250kW yn arbed 42,082kg o garbon y flwyddyn
- Cyfwerth a phlannu 1,979 o goed

### **Total Projected Carbon Savings (Phase 1 and 2)**

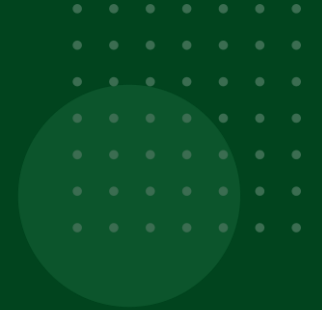
### **Cyfanswm yr Arbedion Carbon Rhagamcanol (Cam 1 a 2)**

- 550 kW solar --> saves 92,581kg carbon per year
- Which is equivalent to planting 4,354 trees
- 550 kW solar --> sy'n arbed 92,581kg o garbon y flwyddyn
- Cyfwerth a phlannu 4,354 o goed






**Bargoed Farm**



# Thank You / Diolch

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