



Battery Storage

Joining the energy storage revolution

EcoDev Group Ltd (EcoDev) is ready to guide our customers into the exciting new world of energy storage using utility scale batteries and how this can be a very valuable source of revenues with limited land take and no environmental impact. The offer outlined here requires no investment from you whatsoever.

Background

Battery storage at utility scale involves large number of batteries typically housed in containers. The battery type used currently is lithium ion in the same form (LFP - LiFePO₄) as used in Electric Vehicles. These offer a high energy density and are very reliable.

A key factor in understanding battery is the storage capacity. Unlike solar or gas generators, batteries need to be charged from the grid and then discharge back to the grid. The level of storage is defined in hours and the typical maximum power is rated in MW (Mega Watts). 1 MW for one hours is a MWh where a MWh is 1000 units (kWh) of electricity. A typical UK house uses 3,000 kWh per annum.

A typical battery storage system would have a grid connection of 20MW and storage for two hours. So this would be a system storage size of 40MWh.

The battery is charged up when power is plentiful (say from renewables or when power demand during the day is low) and then exported back to the grid at times of peak demand (eg evenings).





With the move to ever more renewables an issue arises when this source of power is reduced such as night time for solar and periods of settled weather for wind. This can lead to stability problems (frequency effects) as well as energy supply shortages. Batteries play an important role in helping moderate these effects and stop blackouts from occurring.

Battery storage can also be co-located with solar PV. Here the same grid connection is used and during times of high production from the solar the batteries can be charged directly.

The space needed for battery storage is relatively modest. For the typical 20MW/40MWh above this will need approximately $\frac{1}{4}$ acre. While the storage itself is silent, cooling is needed to keep the batteries at their correct operating temperatures so some noise, be this modest, is inevitable.

While in theory any scale of storage is possible we see a sensible limit currently of 50MW/300MWh (so 50MW grid with 6 hours storage). This would require approximately 2 acres.

Why EcoDev?

EcoDev prides itself in offering a fair and open deal to land owners. Our approach is not predatory nor do we seek to obtain exclusivity during our initial studies - only when we are at the point of incurring significant project development costs (eg grid and planning applications). All reasonable legal fees are covered so our customers incur no costs whatsoever.

We present a clear model showing the potential revenues from an installation and explain clearly the timetable to be expected and the protections in place for the landowner right through to the end of the project life.

We can support both battery storage and solar PV.



Conclusion

Battery storage is one way a land owner can be part of CO₂ emission reduction while also **securing an attractive revenue stream for 25 years or longer**. At the end of this period the land is returned back to its original condition.

If you would like to find out more and how we can maximise revenues from your land please contact us. We promise not to pressure sell and you are in no way obligated - **you have nothing to lose**.

Call +44 (0) 1684 212 540 or email info@ecodevgroup.com

Frequently Asked Questions



What land is suitable?

We typically need a minimum of 1/4 acre (approximately 20MW/40MWh). The land ideally needs to be no closer than 200 meters of housing (for the minimal noise from cooling system). The land should be flat and have road access. Of particular note is the land should not flood, be in an area of SSSI or AONB (though this can be overcome in some cases) ideally be outside the Green Belt (again this can be overcome in some cases) and should not be visible from a footpath or large conurbation. The best sites are not visible from the surrounding area.

Are there other factors I need to be aware of?

Key to any battery storage installation is the ability to connect to the National Grid. In some parts of the country this is becoming difficult, if not impossible, as the grid itself has run out of capacity. The costs of the grid connection can also vary considerably depending on many factors including how far the Point of Connection (PoC) is from the site. EcoDev undertakes a free grid study without any commitment required on your side. We see this as a key early step in determining if a site can be used.

How secure are my rental payments?

The site will be typically owned by a Blue Chip institution. No one owning such a high value asset will be seen as a credit risk. The revenues come from the sale of the electricity (PPA – Power Purchase Agreement) to an electricity reseller who are major corporations.

What happens at the end of the lease?

The owner of the plant has an obligation to remove the system and restore the site to its original state.

What are reasonable legal fees that you cover?

We limit this typically up to £5,000 but are flexible depending on the complexity of the land ownership.

How long will the process take to my first revenues?

While it is easy to offer over optimistic figures we would rather be realistic: The process typically takes 1 year. This is made up of 4 months for securing a grid connection and completing pre screening. Planning takes a further 4 months. Construction follows 2 months later and should take around 2 months.

What security is required for the site?

We will surround ground sites with security fencing which is typically 2m high. Security cameras are required but these use IR lighting (not visible) and only look into the site.

