



## NEWSLETTER

Summer 2019

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Wind review

Business rate reductions

New appointments

First refurb X-Series gearbox installed

“Why I sold my turbine to Arena”

In pictures: New bed plate install





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***“Selling your wind turbine to Arena Capital Partners releases tied up capital that can be used to buy machinery or fund projects on the farm such as building holiday lets...”***

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## **Want to release capital tied up in your wind turbine?**

Earthmill Maintenance parent company Arena Capital Partners Ltd are actively seeking to buy turbines having successfully raised funds to grow their fleet to 100 turbines. If you are interested in selling your turbine get in touch today.



**ARENA CAPITAL PARTNERS LTD.**

**Call today:**

**01937 581011**

Arena Capital Partners Ltd is the parent company of Earthmill Maintenance Ltd.

## Foreword...

Welcome to the summer 2019 edition of the Earthmill Maintenance Ltd newsletter.

Since Christmas we have been busy with open days and presentations talking about condition monitoring. The uptake has exceeded even our own expectations and the team will begin installing it on turbines later this summer.

Our business continues to grow and we are taking on new customers nearly every week which speaks volumes about the hard work of our team. As a result we are employing new engineers and office staff to help manage with the additional workload.

With the summer shows fast approaching I look forward to seeing many of you at the Great Yorkshire, Royal Welsh and Driffield shows. Make sure you stop by the EMM stand to say hello.



Steve Milner, Managing Director



Earthmill Maintenance engineers working on an Endurance E-3120

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The first refurbished X35 nacelle being installed in Lancashire

## First X35 refurbished gearbox installed in Lancashire

This May saw the installation of the first refurbished X-Series gearbox installed on a farm in Lancashire. The exposed twin turbine site experienced a total failure of the gearbox of T1 in 2018 due to damage sustained to the bearing T2 has since suffered the same fate and is awaiting refurbishment.

Project Manager David Smith said "We've seen a number of X-Series gearboxes in both our own and our customers turbines fail over a short period of time. Unfortunately the original gearbox manufacturer is no longer in business and so it's taken some time to source a suitable company to analyse the root causes of failure and refurbish the gearboxes going forward. It's been a steep learning curve for everyone involved but now we have strong working relationships with companies in both the UK and Germany who are highly experienced and skilled."

"Now the turbine is back generating and we understand the root cause of the problem (which stems from bearing failure caused by misalignment) we are now working to improve turnaround time in order to reduce loss of generation and looking to secure a longer warranty period for the work undertaken."

"In total 4 gearboxes have been stripped for analysis and full rebuild. We have recently purchased a full X-Series turbine in component form in order to have spare major components on the shelves to speed up future repairs."



Damaged bearing and gearing in an X35 gearbox

## CMS take up and installation

Since the launch of condition monitoring in February, the Earthmill Maintenance operations team have been extremely busy taking requests for the system to be installed in customer's turbines.

The products are now on order from the manufacturer and Earthmill Maintenance engineers anticipate to begin installing them in August.

Project Manager David Smith commented "we have a large number to install so it will take some time to get through them all but we will make the most of the calmer summer months to get round them as fast as we can."



CMS comprises of a number of sensors placed around the nacelle



## Import/export meter operator invoices

You may not recall dealing with a meter operator such as IMServ when installing your turbine, they provide a vital service carrying out annual meter maintenance as well as making sure live data is accessible to your import and export electricity company.

Some customers lately have been surprised to receive an invoice from their meter operator. This is because the 5 year contract which was originally signed at the point of installation is now due for renewal.

Project Manager Matthew Dowley commented "nobody enjoys receiving bills, particularly unexpected ones, but the meter operator service is vital to keep the meter working and to ensure you get paid for exported electricity".

More information on meter operators can be found at [meteroperators.org.uk/members](http://meteroperators.org.uk/members)

## OFGEM declaration updates

Recently the EMM team have received several calls from clients unable to submit the data required to claim their REGOs. This has been due to OFGEM requiring a legal form following the start of the financial year that declares that users will submit accurate meter readings. You cannot submit any data without a valid declaration.

To sign the declaration form log in to the OFGEM website go to 'declarations' select the 2019 - 2020 declaration and click view.

Once you have opened the declaration scroll to the bottom of the page, click the 'accept' box and then click on the 'Submit ticked Declarations' button. If you have any issues or need help doing this, contact the office on 01937 581011.

## Export Rates: Are you getting the best deal?

The export market is driven by so many external factors such as oil prices, politics, the economy and even the weather. Prices are sensitive to these external factors and fluctuations from one week to another can be volatile. However Earthmill Maintenance are dealing with negotiating export rates on a daily basis and therefore have a strong understanding of what good a rate is at any given time.

Earthmill's General Manager, Dave Broadbank commented, "Helping our clients negotiate better export prices is part and parcel of the service that we provide and doesn't cost you anything. When it's time to renew your export agreement I'd urge you to give us a call to check that the price that you have been offered is fair at any given time. While half a pence difference per kWh doesn't sound like a great deal, over the course of a year it could amount to thousands of pounds in additional income."

Clients can contact our team on the office number, 01937 581011.

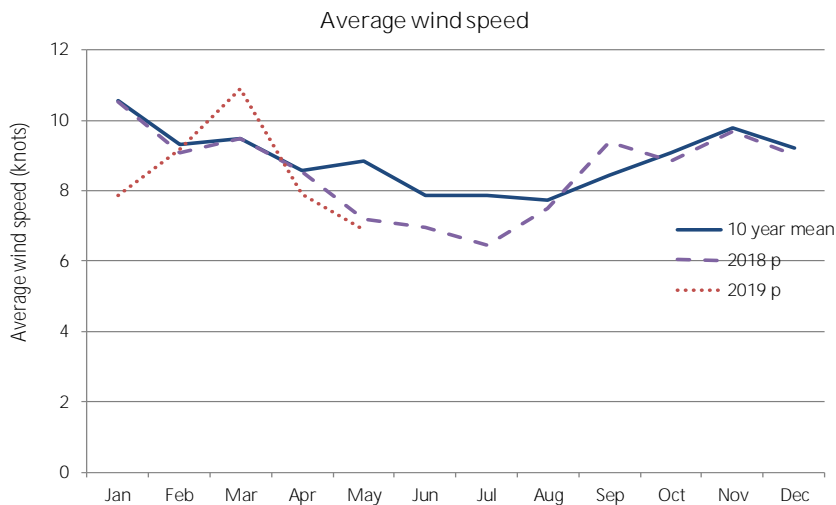
## Did you know...

You can often renegotiate your power purchase agreement part way through your 12 month contract if you are unhappy with the export price you are receiving .

# Wind Review: Windiest March in over 10 years

Following a notably calm summer, the wind levels recovered in winter 2018/19 rarely deviating far from the 10 year average. In March, storms Freya and Gareth gave turbine owners a welcome boost in generation with gusts in excess of 30 m/s in Wales and Scotland and over 25 m/s in parts of Yorkshire and Cornwall. The month finished the windiest March since 2008.

Subsequently storm Hannah at the end of April provided more high winds to boost what was otherwise another month that closely followed the 10 year average wind speed.



Average wind speed for 2019 compared to 2018 and the 10 year average. Source: gov.uk

The average wind speed for the three months October to December 2018 was 4.7m/s, 0.1 m/s lower than in the same period a year earlier, and 0.1 m/s lower than the 10-year average.

The average wind speed for the three months December 2018 to February 2019 was 4.47 m/s, 0.46 m/s lower than in the same period a year earlier, and 0.5 m/s lower than the 10-year average.

With summer around the corner our clients can expect to see a period of calmer weather although we are all hoping for a better summer than last year. Every cloud has a silver-lining however and any window in the weather allows our engineers to make progress with jobs that require them to climb the tower such as installing expander pins or condition monitoring systems.



2019 saw the windiest March in over ten years.

### Typical business rates...



**E-Series: £500-£1000**



**X-Series: £2000 -£3000**

The above figures are only typical rates and can vary depending on circumstances.

## Business rates reductions secured for loss of production

After our article in the winter newsletter about challenging business rates, Earthmill Maintenance have been working with Leeds based business rates specialists, Dunlop Heywood to successfully challenge authorities against business rates charged on sites that have been shut down for lengthy periods of time due to major maintenance taking place.

In several cases the rates charged have been reduced by as much as 60%, acknowledging that whilst a turbine has been switched off for maintenance no generation of power has taken place.

Project Manager Matthew Dowley said “each case is looked at based on its individual merits and this is not a straight forward process which is why we employed the help of the experts at Dunlop Heywood. If you feel that you have been over charged on your business rates I would recommend calling them to get the best advice.”

If your turbine has suffered substantial downtime or if you can associate with any of the following then you should contact Michael Rowbottom at Dunlop Heywood:

- You didn't appeal the 2010 Rating List (there maybe an opportunity to address this)
- The company under which the turbine operates is your only business
- Your rateable value in the 2017 rating list for an E3120 (or equivalent) is greater than £4,500RV
- You have an average annual load factor below 25%

**You can contact Michael by emailing [Michael.rowbottom@dunlopheywood.com](mailto:Michael.rowbottom@dunlopheywood.com)**

## Promotions and new appointments at EMM

Congratulations are in order this month for David Broadbank who has been promoted to become General Manager. Dave has taken over the day to day running of the business whilst still heading up the operations team. So next time you catch him on the phone, don't forget to send your best wishes!

As our maintenance fleet grows so too does our workload. To cope with the extra demand we are proud to announce 4 new additions to the Earthmill Maintenance team.

In the office, new appointee Sarah Kidd has joined the finance department as Accounts Assistant from a Harrogate based accountancy practice. She previously served in the British Army for 24 years as a RAWO.

We'd also like to wish a warm welcome to the 3 newly appointed engineers who have been drafted in to help cope with the ever growing fleet of turbines that we maintain. Daniel Edmunds, who previously worked as a HGV technician at Thompson Commercial, Jonathan Scott who is a qualified electrical engineer has come from a background in plant and site power and Mark Wilson who has switched from Jaguar Land Rover. If you see them make sure to say hello!

We are also currently recruiting for the newly created position of Technical Support Assistant who will join the office based operations team to help monitor and manage our growing fleet.





New nyloil sleeves



The nacelle is gently lowered onto the tower and fixed in place



The nacelle is craned back on to the tower

## In pictures: Replacement bed plate installed in East Yorkshire

This Easter saw Earthmill Maintenance engineers install an upgraded E-3120 bed plate and shaft at an East Yorkshire farm following a failure in the original Endurance designed bed plate.

An issue with the turbine was initially flagged in January this year when farmer Tony called the Earthmill offices to report a grumbling noise coming from his Endurance E-3120 turbine. The Wind Sync dashboard showed low air pressure in the braking system which often indicates issues with the flexi-couplings. The turbine was shut down as a precaution and Earthmill Maintenance engineers were deployed to investigate.

Upon inspection, the flexi-couplings were indeed damaged however the root cause of this was found to be a serious crack in the bed plate. The turbine was on the brink of major failure and only by having an engineer inspect the turbine could this be identified.



***“If the machine had condition monitoring installed we would have been able to identify the problem at a much earlier stage.”***

Operations Manager David Smith said “we were able to identify the failure of the bed plate in the nick-of-time due to the flexi coupling failing as a result of the severity of the crack. If the machine had condition monitoring installed we would have been able to identify the problem at a much earlier stage.”

The bed plate had to be welded in situ before the nacelle could be safely removed in order to send it to be rebuilt incorporating the new design bed plate and shaft.

The turbine is now back generating thanks to a new bedplate and upgraded shaft. The install of the rebuilt nacelle took just a day to install thanks to favourable conditions over the Easter weekend at the often turbulent East Yorkshire site.

The E-3120 is the second turbine in the Earthmill Maintenance fleet to have had the upgrade works completed.



New shaft and bed plate inside the refurbished nacelle



Top: Blades being lifted into place

Bottom: Upgraded brakes are an optional extra

# Q&A: Why I sold my wind turbine to Arena Capital



**If you would like to discuss selling your turbine to Arena Capital Partners please contact Oliver Leake on 01937 581011 or email:**

**[oliver.leake@earthmill.co.uk](mailto:oliver.leake@earthmill.co.uk)**

Cornish farmer Nick sold his Endurance E-3120 turbine to Arena Capital Partners in March this year. Talking to Earthmill Maintenance's Oliver Leake, he explained how he found the process and how he feels now the turbine has been sold.

## **Tell me about your farm...**

The farm is located in mid Cornwall. It was passed down from my grandfather but has been operating as a tenanted farm. We are now taking a change in direction and focusing on tourism.

## **When did you have your turbine installed?**

It was installed by Bristol based TGC Renewables in December 2012. Delays in the planning process meant we missed out on a better Feed-in Tariff rate by just a few days.

## **And how did the turbine perform?**

Despite the lower FiT rate, we have a windy site and the turbine had paid for itself within 5 years. For the first few years it performed really well however after Endurance folded, insurance cover became tricky and the maintenance costs also began to rise as some components failed.

We had to replace the yaw motor and then following a spring tube failure we had to replace the blades with a refurbished set which were supplied by Earthmill Maintenance.

## **So how did you come to selling to Arena Capital Partners?**

I had met Ed Kenny-Levick from Arena around 12 months before we began the process. He explained that they would buy the turbine for fixed lump sum and then pay a ground rent going forward but at that point in time it wasn't the best option for us.

Fast forward a year and our plans for the farm had changed – we wanted to make the most of the tourism industry here in Cornwall. That combined with the turbine having had the issues mentioned and insurers reluctant to pay out, I decided to give Ed a call.

## **How simple was the process to sell to Arena?**

There was a large amount of paperwork and information gathering involved as you would expect for something like this as due diligence needs to be done. Luckily I have plenty of experience in dealing in this kind

of thing through my work so it was reasonably straight forward – Ed was very helpful in providing guidance and direction as well as the team at Earthmill Maintenance who helped by extracting data relating to the turbine's historical performance.

## **How long was the process from start to finish?**

In total it took around 12 months for the sale to be completed however it would have been much faster if not for us having an issue with the refurbished blade set which needed resolving before the sale could be completed.

## **What did you use the money for?**

We invested the money into converting some of the farm buildings into holiday lets. We still have access to cheap energy from the turbine; we pay Arena the export rate for the electricity that we use on site. We also receive a quarterly payment for continuing to host the turbine on our land.

## **How do you feel now the turbine has exchanged hands?**

I'm certainly less stressed when the turbine breaks down it's no longer my responsibility to fork out for repairs and there are no financial worries.

## **Would you recommend selling to Arena?**

If selling a turbine suited somebody's needs like it did for me, then I would definitely recommend selling to Arena. They were always helpful and straight forward to deal with and gave me what I believe was a competitive price.



A shot from last years the Royal Welsh Show

## Show Calendar 2019



### THE GREAT YORKSHIRE SHOW

9 — 11 July

Stand 392



### THE DRIFFIELD SHOW

17 July

Stand H149



### THE ROYAL WELSH SHOW

22-25 July

Countryside Care Area

## Missed our open days? Catch up with the team at one of this summer's shows

The launch of condition monitoring in February saw Earthmill Maintenance open its doors to host a series of open days at its Harrogate premises. The events were fully booked for every session and so the team then took to the road to host further sessions in Driffield, East Yorkshire and Corwen, North Wales in May.

Guests learned about turbine upgrade options and how there is no 'one-size-fits-all' solution for common turbine breakdowns but instead a number of different options to suit differing budgets and turbine design variations. The overriding message was that condition monitoring will protect your wind turbine by catching irregularities before catastrophic failure can occur.

If you couldn't make it to one of the sessions, Earthmill Maintenance will once again be available this July at the Great Yorkshire Show, Driffield Show and the Royal Welsh Show. Make sure to pop by the EMM stand for a brew and a chat with the team.

## What to do if you have a problem with your turbine?

8am –5.30pm Mon-Fri

Out of normal office hours



PHONE: 01937 581 011

EMAIL: [techsupport@earthmill.co.uk](mailto:techsupport@earthmill.co.uk)

Did you know our tech-support email address is monitored by up to 10 people at any given time? This means that somebody will always be on hand to remotely investigate any issues and take the necessary steps to ensure the health of your turbine.





01937 581011

[info@earthmill.co.uk](mailto:info@earthmill.co.uk)



Earthmill Maintenance Ltd is part of the Arena Capital Partners group

ARENA CAPITAL PARTNERS LTD.