



Natural Generation

Energy for the future

Newsletter: June 2020



Units 2 and 3, Cligga Industrial Estate, Perranporth, Cornwall TR6 OEB
01872 571700
www.naturalgen.co.uk

Keeping the turbines turning

Hello from all of us at Natural Generation Ltd, and welcome to our second newsletter of 2020.

And what tumultuous times we find ourselves in. When we brought 2019 to a successful close none of us could have imagined what was in store for us in the New Year.

We have, of course, been affected by the virus and the lockdown in response. But we are lucky to have been able to reorganise our business in order to minimise the impact on our customers.

As previously communicated, we have made some big changes to how we go about our business in order to cope with the impact of the Covid 19 lockdown whilst protecting our customers and staff, and respecting all current Government rules and recommendations. Incredibly our monthly overall wind technician hours has actually increased by 15% since the lockdown took effect and we've needed all 7000 square feet of our newly extended workshop.

All our teams that can work remotely are doing so. We have split our head office into distinct areas with their own entrances to minimise intermixing of the staff that can't work remotely. Field based staff are working in fixed separate teams to minimise contact with others, and have been provided with all appropriate PPE.

As you may be aware, when it comes to remote areas such as the Highlands and Islands some of the current rules do have an impact on us, not least in that most ferries are not running. Accommodation is limited, so we have hired a camper van for one team to use in the far North and West. The training centres we rely on to keep our staff fully qualified to work are shut, some customers have made the decision for us not to attend site during the lockdown, and whilst we take all measures with regards to the Health & Safety of our staff and others, we ultimately respect the clients' wishes.

Wherever possible we will be carrying out scheduled work as usual. Through our remote monitoring service, we will still monitor and remotely fix as many issues as possible and in the case of breakdowns we will endeavour to minimise the delays in reaching your equipment, but we cannot promise to avoid all delays. We will maintain good contact, especially in advance of any visits. Looking ahead, we hope to get back to normal as soon as possible when the lockdown is lifted, and we plan to go ahead with a new larger base of 2500 square feet in Bathgate which will have a full workshop facility.

We know how important it is to minimise the downtime for your turbine and seek to assure you we will do everything we can to maintain our level of service through these difficult times. Thank you in advance for your understanding. With a bit of flexibility on both sides we can get through this and get things back to normal as soon as possible.

If you have particular issues or concerns please do get in touch to discuss them. Thank you, once again, for your continued custom. We never take it for granted. Best wishes,

Ivor Thomson
Managing Director



NEWS FROM THE REGIONS



Scottish update

Despite the Covid 19 situation, we are going ahead with our plan to move to a larger premises in Bathgate which will be not just a store but a full-service workshop and manned office with 2500 square feet of space. This will improve turnaround times for major works required in Scotland and the North.

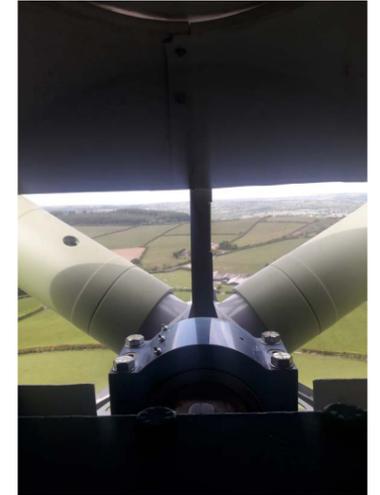
We realised that our last newsletter suggested that it was almost "business as usual" for Natural Generation during the Covid 19 lockdown, and whilst we are doing our best to achieve that, we also understand that is not the case for some of our customers in Scotland.

Whilst the lockdown does mean that we cannot undertake major works in Scotland at the moment, we are doing everything we can to minimise disruption to scheduled maintenance visits caused by the rules we are faced with. We will do our best to keep you well updated as events unfold.

As already mentioned, a lack of ferries makes it impossible to achieve normal service in the Islands, and because our teams cannot get hold of accommodation their range is limited, affecting some mainland customers. We have hired a camper van however so we have a mobile team that can now reach most of the outlying areas.

The Midlands and North of England

Our teams in the Midlands and North of England are working hard to maintain as normal a service as possible. Major works are continuing and we have just finished re-erecting a newly refurbished nacelle complete with a brand new upgraded bedplate and exchanged blades.



Scheduled work is largely but not entirely unaffected, and we are working hard to make sure we can get back to normal as soon as possible. We are also planning to open a new workshop in Wales.....watch this space!

South Western Region

Our 7000 square foot head office workshop, remains open for business and has been busy with major upgrade works on mainly Endurance turbines. These have required complete strip-downs of the turbine components, replacement of the original bed frame with the new upgraded version from Gale Force Designs, and blade exchanges to ensure a long and reliable life ahead.



We are currently working on an exciting project in the form of building a brand new Endurance nacelle from parts, instead of the more usual reconditioning of an existing machine. We believe this is a UK first.

As mentioned earlier, we have made significant changes to our working practices and the layout of the office and workshops to minimise the risk of viral transmission, in accordance with all available Government guidelines

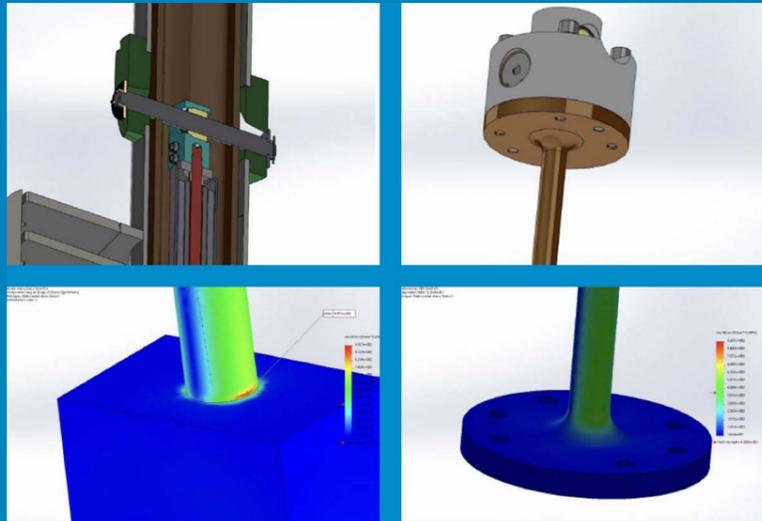
Endurance spring tube failures – our solution

As the age of the Endurance turbine fleet grows, new problems periodically come to light and we are always looking for solutions to offer our customers in order to keep the machine working efficiently.

One such issue causing a headache for owners is the failure of the threaded rods that are part of the pitch control mechanism. The end fittings experience repeated sideways strain as well as the longitudinal tension they are designed for, and sooner or later they become noisy – which can cause complaints – and eventually fail.

We have studied and tested several different engineering approaches to solving this problem over the past few years including spherical bearings, which we found to have their own set of associated issues.

We have worked closely with specialist supplier All Energy Management to develop an improved design which removes the sideways strain that causes the failures. After exhaustive testing in the USA this upgrade has now become our standard response to this issue and is available to all Endurance turbine owners.



Original (left) and improved (right) design of the tension rod ends showing stress modelling Images copyright of All Energy Management

We are confident that this is not just a short term fix, but a genuine long term solution to this issue.

The rod end upgrade is one of a suite of upgrades we can offer to Endurance owners. Generally when a turbine comes in to our workshop it will have a full refurbishment including upgrades to its bed frame, blade roots and rod ends as well as a gearbox check and reassembly with laser alignment.

These upgrades plus our 24 / 7 / 365 monitoring service, included as standard with all maintenance contracts, allows us to keep turbine downtime to a minimum for our customers, all year round.

SPRING STORMS BLOW WIND POWER RECORDS AWAY

The succession of storms that swept the UK in the early part of the year brought rain, snow, sleet and hail but also lots of wind. Many turbine owners saw record power output figures in the first quarter of the year

The storms earlier in the year may not have been much fun for everyone, but for turbine owners they gave some record breaking power generation figures. One of our Vestas fleet produced just under three times more kWh in one month than usual, that's nearly 80,000 kWh's!



SOLAR POWER ENJOYS A MONTH IN THE SUN

Once the storms had cleared, the sunshine we all enjoyed was a boon for our solar customers, big and small.

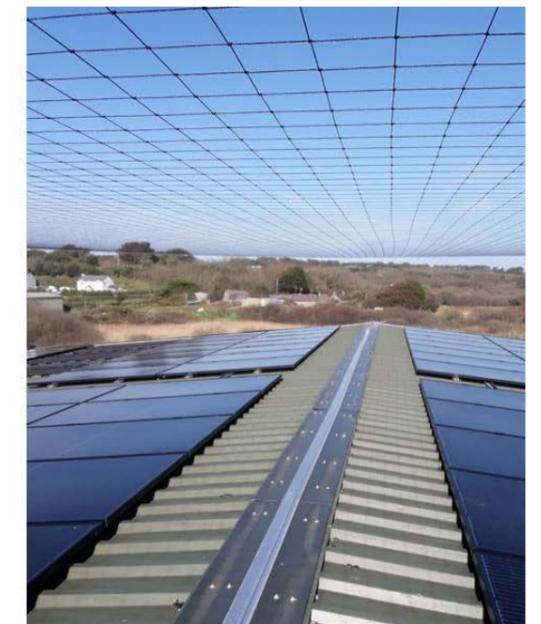
March and April brought the UK and Islands an unusual (but very welcome) amount of sunshine for this time of year. This accompanied with some cool air made it the perfect climate for our customers solar panel arrays to see maximum production. Giving anyone with a solar power system more than reason to smile.

In fact according to Alice Clarke, our Solar Works manager, the figures were 20% up on the same period last year.

It's been a busy month on the solar side of the business, with planned maintenance on some of the larger farms and aerial surveys using drones with infrared cameras. These are the quickest way to look for hot spots on arrays, which indicate poor connections and hence power loss.

This technique helps us to make sure the farms we look after are performing to their full potential every day.

We've also been working on the next stages of some of last year's projects and writing proposals for some exciting future work. Watch this space!



Two very different locations in which we have installed solar PV

NEW ADDITIONS TO THE TEAM

Natural Generation continues to grow. With over 500 turbines to look after, we have been growing our team, especially in Scotland and at head office.

Unfortunately the Covid 19 outbreak means that the training centres we rely on are closed, so some of the new faces are instead doing online training until the lockdown is lifted. As soon as we can bring them back into the fold, we will. We are committed to giving our staff the best tools and training to let them to do their jobs safely.

In addition to the new wind technicians we have also added 3 new hires to our support team at head office. We are really pleased to be expanding our customer

support team in each region. One of our main goals this year was to improve customer communication, you gave us feedback in the customer survey and we really have listened.

There is now a Works Manager, Customer Service Representative and an Administrative Assistant for each region. We are always trying to achieve a smooth and seamless process when it comes to managing your account, whether that be answering your call if you have a query, scheduling a service or working with you to plan and major works. There is always support for you as a customer, and with our new 24/365 Tech support team, no matter day or night you know that you will be able to call and speak to a member of staff.

WHAT DO NATURAL GENERATION'S STAFF DO FOR FUN?

Here in Cornwall we are lucky enough to be (almost) surrounded by the Atlantic ocean, and many of our staff make the most of the water during their time off. Cornwall's south coast offers calm waters that suit sailing and fishing, but the North Coast faces the swell and is famous for its surf.

Tom Lowe and Harry Randall – Wind Technicians - are both keen rowers in the surf boat racing class, which was developed in Australia and then came to these shores. Think of rowing and you probably think of quiet lakes and rivers but this adrenaline-fuelled sport – originally a life-saving method – uses boats designed to go out in waves.

Teams of four, with a coxswain, compete to go out through the surf, round a course and surf back in with the waves.



Jo Murphy – Sales & Marketing co-ordinator - is another keen rower in a different class of boat, having been in Newquay Gig Club's Ladies A Crew since she was a teenager. These 6 oar boats are based on a historic design that would have been rowed up to 100 miles out to sea carrying a pilot to guide ships in to unfamiliar waters.

In fact, 3 of the club's boats date back to the early 1800's, with one of them, "Newquay" having been built in 1812 and used ever since. She's one of the oldest boats in the world to still be in regular use.

For Jo it's a chance to get out in the fresh air, let off some steam and take in the beautiful coastline. It's also a family affair, as her Mum rows for the club too.



Recommend a friend.....
and get 10% off a year's maintenance contract

Natural Generation is growing. More customers equals more technical staff equals a better service.

If any customer can introduce a friend that might like to discuss the Operation and Maintenance of their wind or solar system, we are always grateful to be put in touch. If they become a customer we will be happy to give them 10% off the first year of a 5 year maintenance contract when they sign up, and give you 10% off your next annual invoice.



ENDURANCE WIND POWER E3120 Contract Options

	Bronze	Silver	Gold	Platinum
Preventative Maintenance Scheduled visits for preventative maintenance including oil changes and component checks.	every 8000 hours	every 6 months	every 6 months	every 6 months
24/7, 365 days a year Response Monitoring A dedicated team of wind monitoring technicians will observe your turbine around the clock, 24/7 365 days a year. Remote fault diagnosis and resolution where possible.	✓	✓	✓	✓
Emergency Telephone and Email Support Available 24/7, 365 days a year.	✓	✓	✓	✓
Online Monitoring and Reporting Platform Customer access to online monitoring platform and fault notification reporting.	✓	✓	✓	✓
Reactive Labour Labour for all reactive on-site work relating to issues affecting generation (excluding operator scheduled work).			✓	✓
Condition Monitoring Specialist hardware installed on your turbine providing early warning of irregularities to help avoid major incidents.				✓
Reactive Parts Parts for turbine on-site work relating to issues affecting generation.				✓
Availability 95% Availability Guarantee				✓
Annual Rate	£3490	£3940	£4250	£9400
Minimum contract term (years)	1	1	5	5

On-site labour rates apply to all sites. Response time may vary depending on location.

Call our fee £270 (England, Wales & Scottish mainland)
Includes travel and 1st hour on site £270 (Scotland Islands & Northern Ireland)
Additional hours (2) £270 (South East England & Outer Scotland)
On-site labour rate £47 per hour per technician



Picture of the month last month: Monan Wind Turbines, Scotland

Win a £50 M&S voucher in our quarterly photo competition

Every month we will be giving away a £50 M&S voucher for the best photo we receive from a customer of their turbine or solar array (and that we can use in Natural Generation marketing).

A winner will be picked at the beginning of every month and we look forward to seeing what you send in!

Please email entries to: laura@naturalgen.co.uk

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