The case for wind energy

There is clear evidence that the global climate is changing, primarily as a consequence of burning fossil fuels. For the UK, these changes will mean hotter, drier summers and wetter, milder winters. Using wind energy to generate electricity avoids greenhouse gas emissions. By displacing fossil fuels, wind energy helps to meet international, national and regional targets that have been set to combat climate change.

However, the benefits of using wind energy are not confined to tackling climate change. Problems associated with conventional electricity generation are also avoided, including poor health related to poor air quality, damage to the natural and built environment caused by acid rain, and – in the case of nuclear – radiation-related health and safety problems.

In terms of energy security, wind energy is inexhaustible, is not subject to fuel-price rises or the uncertainty of international fuel markets, and has no requirement for fuel transportation or mining.

Furthermore, wind farms are easily and quickly decommissioned, leaving no significant adverse legacies for future generations.

Meet the team

Gary Scrowther
Construction Site Manager

Tel: 0755 442 1084

Email: gary.scrowther@res-ltd.com

Gary Scrowther is the site manager for Roos Wind Farm and will be based on site throughout the construction phase. Gary can be contacted if you have any concerns about activities relating to construction.

Alison Jones
Community Relations Manager

Tel: 01923 299 328

Email: alison.jones@res-ltd.com

Alison is community relations manager for Roos Wind Farm. Please contact her if you have any questions regarding the community fund or need general information about the company or renewable energy. Alison is also the contact person for any press enquiries regarding Roos Wind Farm.

About RES

RES is one of the world's leading independent renewable energy developers. We have developed and/or built more than 5GW (gigawatts) of wind capacity worldwide. In the UK, we currently have more than 1GW of onshore wind energy either constructed, under construction or consented.

We work closely with communities, local authorities and independent experts to ensure that our wind farms are built to the highest standards. We want to be good neighbours and will listen to and address any questions or concerns you might have. Please contact our site manager or community relations manager in the first instance (see above).

RES

For those receiving this newsletter by post, we obtained your address through a national post-code database. If you do not wish to receive further information from us about this proposal, please write to us and let us know.

For further information, please contact:

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Want to know more?

We would be happy to cover any issues in more detail in forthcoming newsletters. If you have any suggestions, please let us know.

More information about wind power can be found at the following websites:

www.renewable-uk.com

Renewables for your home: www.energysavingtrust.org.uk

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ROOS WIND FARM

power for good

Construction Newsletter 1 January 2012

Welcome to the first in a series of newsletters from RES designed to keep the local community informed throughout the construction of Roos Wind Farm.

THE COUNTDOWN TO GREENER ENERGY BEGINS

Work to construct Roos Wind Farm at Sunderland Farm between Roos and Burton Pidsea is about to begin. Once completed, the wind farm will generate up to 17.1MW (megawatts) of renewable electricity. It will generate electricity roughly equivalent to the average annual consumption of 11% of all the houses in the East Riding of Yorkshire*.

RES was given consent to build the wind farm in May 2010 following a Public Inquiry. Since then, we've been busy finalising the details so that the project can be completed on time and with minimum disruption to the local community. Minor road improvements were carried out in October and November to improve access to the site. We expect to begin work on site in January 2012 and construction will take approximately 18 months to complete.

The wind farm will begin generating in Spring 2013, triggering a community benefit fund of £36,000 per year for local people to invest in local projects.

You can learn more about our construction programme, what it takes to build a wind farm and the community benefit fund inside.

Roos Wind Farm – Key Facts

Location:
Sunderland Farm

Number of turbines:
9

Installed capacity:
17.1MW

Homes equivalent:
14,000* (Approx)

Community Benefit Fund:
£36,000 per annum for 25 years

**Based on RES studies and annual average electricity consumption figures from the Department of Energy and Climate Change 2008.*

Land right up to the base of wind turbines can be re-instated once construction is complete. This example is at Dun Law in the Scottish Borders.

HOW DO YOU BUILD A WIND FARM?

Building a wind farm is a highly complex process that requires a lot of thought and care.

Here are some of the tasks that the RES construction team will be undertaking over the next 18 months.

Getting there

Access is one of the key considerations when selecting a potential wind farm site. Transporting people and materials generally involves only very minor additions to local traffic levels. However, the turbine components themselves are classified as abnormal loads and are delivered to site using special lorries.

The most appropriate route to Roos Wind Farm uses the A1033 from Hull towards Winestead. The wind farm site is then accessed from Winestead Lane and Chimney Field Lane before turning left onto the B1362 and then right onto Rectory Road travelling north to the site entrance. Minor improvement work has already taken place to enable delivery of the larger turbine components.

To minimise disruption during construction and turbine component delivery, a traffic management plan has been developed and agreed in advance with the Highways Agency, East Riding of Yorkshire Council and the police.

Making tracks

One of the first things we do on site is to prepare the access tracks which will allow the turbines to be delivered, erected and serviced. Wherever possible we upgrade and use existing tracks, which brings a number of environmental benefits by:

- reducing disturbance to existing flora and fauna;
- reducing the amount of aggregates required – and thereby;
- reducing the number of vehicle deliveries using local roads.

Firm foundations

The nine turbines at Roos Wind Farm will stand on a combination of gravity-based and piled concrete foundations, dependent on ground conditions at each location. Work on the foundations will start in March 2012. These foundations give the turbines a firm base on which to stand for the 25 year life of the wind farm.

Once completed, the bulk of each concrete foundation is located at least 1 metre below existing ground level. The only visible part is a short central column approximately 5 metres in diameter. Once the turbines arrive on site, they are bolted on to this solid concrete core. This allows backfilling and re-instatement of the land right up to the base of each turbine.

Work on site will take place between 7.00am and 7.00pm Monday to Friday and between 8.00am and 1.00pm on Saturdays .
Site working may extend to seven days per week for limited periods during turbine erection and commissioning, dependent on weather conditions.

Going up

The wind turbines are delivered in parts and assembled on site using cranes. The delivery of the blades, towers and nacelles for Roos Wind Farm is expected to begin in October 2012. The nacelles are the box-like structures at the top of the tower, which house the gear box and generator that enable the movement of the blades to be converted into clean, green electricity.

In addition to the access tracks and the nine turbines, there will be a number of supporting structures put up on the site. Some, like the site store and compound, will be temporary. Others, like the electricity sub-station which feeds the power generated by the turbines into the national grid, will be permanent.

It will take approximately 18 months to complete Roos Wind Farm. Once it is operational, the wind farm will provide a community benefit fund of £36,000 per year for local people to invest in local good causes (see below).

Roos Wind Farm has an operational life of 25 years.

COMMUNITY BENEFITS

The UK aims to generate 20% of its electricity from renewable resources by 2020. While Roos Wind Farm will help to meet this national renewable energy target, it is only right that the local community should benefit directly from hosting the wind farm. This is the purpose of the Community Benefit Fund.

Roos Wind Farm will provide £36,000 every year for 25 years – or £900,000 over the lifetime of the wind farm – for the local community to invest in projects that are important to them. As elected representatives of the local community, Roos Parish Council will manage the fund and make the final decisions on where the money is spent. Further details of how organisations can apply for funding will be made available when the wind farm nears completion and the fund becomes available.

CONSTRUCTION MILESTONES

November 2011	Offsite roadworks completed
January 2012	On-site construction begins
March 2012	Work on turbine foundations begins
May 2012	Electrical works
October 2012	Turbines delivered to site
March 2013	Site begins generating

Construction of a turbine at Wolf Bog Wind Farm, Northern Ireland

Did you know?
By displacing fossil fuel generation, Roos Wind Farm could help to prevent up to 27,000 tonnes of CO_2 per year from entering the atmosphere*.

Stay safe

For your own safety, we must ask you not to drive into, or park at, the site entrance from Winestead Lane. Please do not attempt to slow or stop along the A1033 in order to view the construction activities. If you are on foot, you can view progress at Roos Wind Farm safely from the bridle path to the south of Roos Drain.

**Based on RES studies and where 430g CO_2/KWh represents the energy mix in the UK.*

OPPORTUNITIES FOR LOCAL SUPPLIERS

RES will employ local companies during the construction and operation of Roos Wind Farm where the services and supplies are available to match requirements. Among the opportunities are:

- Construction materials suppliers – concrete, aggregates, building materials, etc
- Construction subcontracts – civil engineering, electrical and building contractors, etc
- Plant hire contractors – excavation, earthworks, craneage
- Labour hire companies – engineers, plant operatives, labourers, etc

Projects of this nature inevitably require some people from outside the local area. If you can offer local accommodation or catering services, we'd like to hear from you too.

We operate to stringent environment, safety and quality standards and these form an important part of our contractor selection procedure. If you are interested in supplying any of the above services, please email:
John Boyce, Construction Project Manager, john.boyce@res-ltd.com