

## About Vattenfall

Vattenfall is a leading European energy company with approximately 20,000 employees across Northern Europe and growing numbers in the UK. For more than 100 years we have electrified industries, supplied energy to people's homes and modernised our way of living.

We now want to make fossil-free living possible within one generation. Vattenfall has been investing in the UK for more than ten years, and with more than £3.5bn invested, we have grown our wind business from one project in 2008 to eleven operational onshore and offshore wind farms today, and now operate more than 1GW of wind and solar power capacity with around 5GW in the pipeline. We also continue to grow in district heating, distribution networks and are a pioneer in delivering co-located solar and battery storage at our wind sites.

Vattenfall invests more than £2.5mn annually into local communities in the UK hosting wind farm projects. That investment can come in many forms including infrastructure investments, business loans, skills, training and education programmes, sponsorships, shared ownership, and benefits-in-kind.

## Vattenfall in Wales

Vattenfall is a significant investor in Wales with three operational hybrid onshore windfarms:

**Pen y Cymoedd (South Wales)** - our flagship 228MW onshore wind farm operational since 2017. Its 76 turbines can produce enough electricity to power 15% of Welsh homes annually (around 188,000 homes). In addition to the production of fossil free electricity, a 22MW battery is co-located at the wind farm, the UK's first and largest co-located battery and onshore wind project. The battery is able to respond to the needs of the grid system in less than a second - supporting a stable supply of electricity to UK homes. Electric vehicle charging stations are also installed at the wind farm, in anticipation of taking our entire fleet of site vehicles electric in the next four years. The wind farm cost £400mn to construct, and directly supports 30 local jobs. Just over half (52%) of construction spend was in Wales.

**Parc Cynog & Pendine (Carmarthenshire)** - Parc Cynog has been operational since 2001. The initial five turbines were extended in 2009 with the addition of the Pendine wind farm and today 11 turbines are in operation providing 8.4MW of power, enough to provide electricity to 4,800 homes. In 2016 we opened a 4.94MW solar array on the site which shares a grid connection with the wind farm. This was Vattenfall's first onshore wind-solar co-location project in the UK. The project makes an important contribution to the Welsh economy, with around £400,000 invested every year through the maintenance, servicing and operation of the site. A community benefit fund was established in 2010 when the Pendine wind farm started operations. Following construction of the solar farm and after consultation

with the local community, we agreed to provide solar panels on a number of buildings including a community hall in Llanmiloe instead of topping up the community benefit fund.

We have ambition to make further investments in Wales and have a pipeline of projects in development.

### **1) How can the UK Government best support the deployment of renewable generators in Wales?**

The private sector stands ready and waiting to invest in renewable generation in the UK, and UK Government can help to unlock investments by focusing on the following priorities:

**Ensure that government funding streams are focused on bringing forward the type and quantity of infrastructure that will put the UK on a path to net zero by 2050.** The Contract for Difference Allocation (CfD) Round 4, expected in 2021, is an opportunity to turbocharge green infrastructure investment in renewable generation, and future CfD auctions and budget & capacity caps should be aligned to net zero targets. For low carbon heat, ensuring that the Green Heat Network Scheme is properly targeted to balance investment risk is key to attracting private sector investment in the district heating sector.

**Reform the planning system** to make decisions fast, to support co-location and co-use, and to better balance competing interests to support the rapid scaling up of appropriately sited renewable and low carbon infrastructure.

**Support British manufacturing and create opportunities for local employment.** There is an opportunity to build national resilience and support the energy transition by retraining and upskilling the UK workforce. Focusing on opportunities that maximise benefits for the UK economy may increase the cost of new infrastructure in the short term but will better support local economies in the longer term, and could provide additional opportunities for export-driven growth.

**Deepen decarbonisation into untapped areas** like district heating, and fast track innovative new technologies - such as by developing a strategy for green hydrogen.

### **2) How should the UK and Welsh Governments work together to support the development of renewable energy projects in Wales?**

We welcome the Welsh Government's recent decision to adopt a net zero target by 2050, and the acknowledgement from both UK and Welsh Governments that renewables deployment will need to play a critical role in delivering that. We note, however, that despite the Welsh Government target for renewable electricity to meet 70% of electricity consumption by 2030, the Climate Change Committee has reported that "*The rate of installation of new renewable electricity capacity in Wales has fallen every year since 2015*".

In that context we would urge Welsh Government to prioritise the deployment of onshore wind where a significant pipeline of projects with grid connections in place could be deployed quickly. A faster deployment would also maximise the significant employment and supply chain opportunities for Wales.

### **Supporting grid investments**

The contribution renewable generation investment can make is limited by a lack of grid capacity in mid-Wales. We therefore welcome Policy 18 of the Welsh National Development Framework which says that Welsh Government will “*work with stakeholders...[to] reduce the barriers to the implementation of new grid infrastructure*”.

Grid upgrades would help to enable the development of both established and novel technologies in Wales, including onshore wind, Round 4 offshore wind leasing, floating wind in deeper Welsh waters, and wave & tidal technologies. Furthermore, we note that the recent letter from the UK Climate Change Committee to the First Minister of Wales stated that ‘*electricity networks must be significantly strengthened across the UK to accommodate electrification of heat and transport.*’ We agree that deeper penetration of renewables generation will be needed to decarbonise other sectors, and in particular to support industrial and agricultural decarbonisation, and to enable the likely demand for electric vehicles.

Vattenfall is supportive of any actions Welsh Government could take to expedite grid capacity, for example underwriting grid costs. We welcome the establishment of the mid-Wales Steering Group by Welsh Government which will create an understanding of future generation (capacity, location and timelines) and allow a clearer picture of the network needs which will allow SPEN, WPD and National Grid to better plan and deliver for Wales.

We would support Welsh Government establishing a national stakeholder group of representative organisations to consider the proposals of the Mid Wales Steering Group and advise Welsh Government on the acceptability of network infrastructure with a particular eye on environmental, economic development and fairness considerations.

### **Facilitating land for onshore wind developments**

We believe there is significant opportunity to deliver more renewable energy schemes on forestry and other land owned by the Welsh Government. However Natural Resource Wales needs appropriate resourcing to speed up the pace at which invitations to tender for renewable energy developments are offered on the Welsh Government’s estate.

### **Recognise and communicate to all levels of society that a net zero Wales will change how Wales look**

The infrastructure and land use of the UK is the consequence of the industrial and agricultural revolutions of the past. Farming practices and large scale, centralised fossil-fuel power stations have defined current land usage. A net zero economy in Wales will necessarily look different.

Large-scale renewable energy deployment and the supporting electrical infrastructure for the transport and heating sectors, coupled with the emphasis on habitat restoration, will need

the support of national and local government as this change will create tensions. National and local governments must ensure competing interests and barriers are resolved quickly and effectively, recognising the damage climate change is causing to Wales already, the Welsh ambition for a net zero target, and the significant opportunities decisive actions can bring to Wales.

**3) What mechanisms can ensure that subsidies for renewable generators are good value for money?**

Vattenfall believes that the CfD mechanism is currently the right framework to deliver new competitively-auctioned low-carbon generation in the UK, and we welcome the decision to include onshore wind in the next auction round. The scheme is well understood by both developers and financiers, and has proven its ability to deliver large-scale projects, reduce costs, and support the UK's industrial strategy.

To maximise the local economic opportunities from onshore wind and solar, developers and local supply chains would benefit from a government commitment to maintaining Pot 1 auctions in future auction rounds, and maximising the delivery of mature renewable projects. This would ensure that local and regional economies can effectively contribute to the net zero target, and allow developers and the supply chain to plan for the capital investment of the future.

The current focus of the CfD scheme is to ensure that competitive tension in each auction round drives down the cost of delivery. This focus, whilst understandable, pushes developers to procure in the cheapest markets which may not be local or UK based, and therefore not of greatest value to the UK economy. A more strategic approach that recognises the value of additional investment in UK supply chains would deliver better value for the UK economy in the short, medium and long-term.

**4) What opportunities are there for renewable generators in Wales of greater interconnection with other electricity markets?**

Vattenfall is not submitting a response to this question.

**5) How can the UK Government facilitate Welsh contributions to COP26?**

Vattenfall is not submitting a response to this question.

**6) What implications is COP26 expected to have for Wales?**

COP26 will shine a spotlight on administrations across the globe, and as the UK is co-hosting the Conference, there will be particular attention on how the UK and its devolved administrations are turning positive talk into tangible deliverables. Past missed opportunities,

inefficiencies in bringing forward current opportunities, and unclear plans for the future will be highlighted and scrutinised.

Positive action to drive fast decarbonisation, however, can use COP26 as a springboard, and secure strong support.

### **7) Has the COP26 Year of Climate Action had any significant implications for Wales?**

Climate change remains one of the most challenging societal issues we are facing and urgent action is needed to meet our ambitious decarbonisation targets. The UK has a unique opportunity to align a post Covid-19 economic recovery with the delivery of net zero, reaffirming the UK as a green economic leader in the run up to COP26 and beyond.

Long-term, stable regulatory frameworks are important for attracting private sector capital to low-carbon investments. These frameworks, alongside clear government targets and ambition, will be key to decarbonising the UK economy. As co-host of COP26 the UK has a unique opportunity to showcase international leadership by committing to an ambitious and action-focused green economic recovery.

### **8) What opportunities are there for renewable energy to aid Wales post-COVID-19 economic recovery?**

Investments in renewable and low-carbon energy infrastructure will support the decarbonisation of the wider economy, and will deliver highly-skilled jobs across the country. The infrastructure needed to move Wales to a net zero economy, with renewable energy the foundation of its energy generation, means significant investment in Wales will be needed. The more ambitious the plans, the more investment will be needed. The supply chain in Wales needs these opportunities. Onshore renewables infrastructure will be the most direct opportunity for investment into the Welsh supply chain.

#### **It supports decarbonisation:**

Welsh Government has an ambitious 70% renewable electricity target for 2030 and a statutory duty to reach net zero by 2050. This brings with it a clear need for new or improved electricity infrastructure to generate and transport energy to the homes and businesses that need it.

Renewable developments are low-cost, secure, and low-carbon generation technologies and will play a central role over the coming decades in helping the UK meet its ambitious net zero target. Onshore wind offers the most cost-effective choice for new electricity in the UK, bar none - it is cheaper than gas, nuclear, coal and other renewables, and is technology that can deliver both at speed and scale if barriers are addressed.

#### **It brings economic benefits:**

Renewable energy developments are often the only means of significant infrastructure spend in rural and non-metropolitan areas, largely based outside London and the south-east, and offer local communities economic diversity from reliance on agriculture and tourism.

Renewable energy infrastructure pay business rates which are retained by local authorities to provide essential local services such as adult social care and waste collection. This is a much more resilient council revenue stream than other forms of property which are vulnerable to the broader economic climate.

**It provides community benefits:**

Best practice engagement around potential community benefits will see social value to the local community maximised. As each community is different, Vattenfall spends significant time and resource to understand local needs, working with communities to tailor community benefits packages to help them reach their goals. We are moving away from a focus on a “pounds per megawatt” formula of community benefit which is not always easily understood by local communities. Instead, we may sponsor a local employment or skills initiative, support a social enterprise, or deliver capital works that improve the look or feel of a place.

Welsh Government published “*Local ownership of energy generation in Wales – benefitting Wales today and for future generations*” in February 2020. We believe the forthcoming guidance provided to developers, local communities and decision makers regarding ownership of renewable energy projects must be driven by an ethos of facilitation. This will be critically important in what is likely to be an increasingly competitive, auction-driven environment for project developers weighing respective merits and demerits for their project pipelines.

We have some experience in offering shared or local ownership on several of our projects, and have found that this is a better offer for our local authority partners than for local communities. Whilst superficially attractive to local communities, shared and local ownership is extremely resource-intensive and costly to deliver. We have found that local communities often significantly over-estimate the income an investment of this type would deliver. Furthermore, if community investments are debt-financed, there can be many years of debt payments before incomes are generated. As an alternative, we would like to offer a ‘share of revenue’ in the suite of community benefit options. When power is generated, communities would benefit financially in the same way as developers. We believe this would give communities a genuine stake in a project, and connect them directly to the benefits of onshore wind.

## **Case Study: Pen y Cymoedd community benefit fund**

We have established a community benefit fund at the windfarm to manage investments into the area hosting our project in the upper Afan, Cynon, Neath and Rhondda Valleys. The fund is the largest wind energy community fund in the UK, making available around £1.8mn annually (indexed linked) for the operating life of the wind farm of 25 years.

Before the Community Fund was launched, residents and communities were widely consulted and asked the question: “What could this Fund do to bring real benefit to the local area?”. Following a two-year conversation with the community in which more than 3000 residents, groups and organisations were involved, a Vision for the Fund was shaped that continues to guide all efforts to put in place the best possible funding vehicle that can serve the community for the long term. It has funded numerous projects including sports and arts clubs, and local infrastructure improvements.

The Fund provided relief to Rhondda communities impacted by flooding in January and February 2020 and has made emergency, fast-track funding available to support local organisations through the Covid-19 crisis. This includes a Survival Fund that will provide emergency cashflow funding for organisations at risk of closure, and a Project Fund that will support additional services that meet immediate community needs.

### **It supports jobs and builds local supply chains:**

Onshore wind can deliver skilled green jobs in remote/rural locations where jobs are often seasonal and insecure or low value, for example in agriculture or tourism.

Analysis undertaken by Vattenfall of its onshore wind expenditure over the last 10 years has shown that over 50% of capex is spent with UK suppliers (for example on civils and electrical engineering) and over 90% of opex is spent in the UK on operations and maintenance. As an example, during the construction of our Pen y Cymoedd wind farm in South Wales, we estimate more than 600 jobs were created with 90% of the site workforce living within 35 miles of the site. Companies like Jones Bros, EDS HV, Prysmian, and Express Reinforcements all benefitted from civils, electricals, cabling, and steel contracts with SMEs also benefitting in areas like site security, landscaping, and fencing.

### **It can be a catalyst for environmental regeneration:**

Renewable developments can be a catalyst for environmental regeneration, and onshore wind in particular can support habitat improvements in line with Defra’s 25 Year Plan to improve the Environment. For example, the £3 million Habitat Management Plan associated with Vattenfall’s Pen y Cymoedd wind farm in South Wales is one of the largest peatland restoration projects in Wales, in an area heavily degraded by commercial forestry, with habitat designed to support rare species such as nightjars and honey buzzards.

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