

**Graig Fatha**  
wind farm

# **Co-Pilot Wind Project Ltd Co-operative Society**

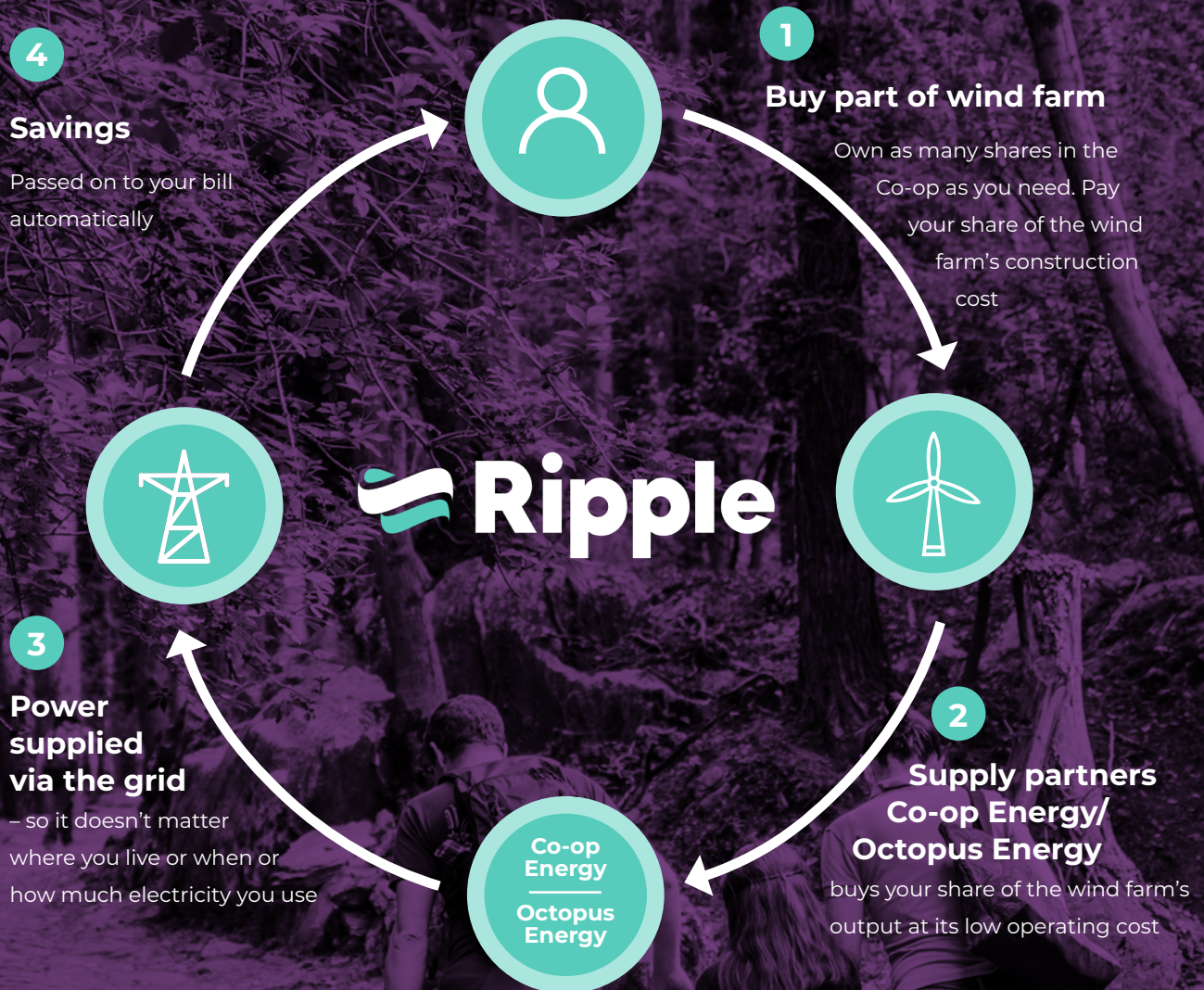
**Share Offer for  
the Graig Fatha  
Wind Turbine**

Photo: VENSYS





**Own part of a new wind farm and get clean, zero-carbon electricity supplied to your home via the grid by Ripple's supply partner, Co-op Energy.**





# 01 Important Notice

This offer document has been prepared by Co-Pilot Wind Project Ltd and its Directors, who are responsible for its contents. This offer document has not been approved by an authorised person within the meaning of the Financial Services and Markets Act 2000 (FSMA). It is exempt from the financial promotion restriction (in Section 21 of FSMA) on the grounds that withdrawable, non-transferable shares in a co-operative society are not a controlled investment for the purposes of FSMA.

Co-Pilot Wind Project Ltd is not regulated by the Financial Conduct Authority and prospective investors will not have the benefit of the Financial Services Compensation Scheme and other protections afforded by FSMA or any of its rules and regulations.

Prospective investors should not construe the contents of this offer document as legal, tax or financial advice. All prospective investors should consult their own professional advisers as appropriate as to the legal, tax, financial or other matters relevant to the suitability of an investment in the shares.

The distribution of this document in jurisdictions other than the United Kingdom may be restricted by law and therefore persons into whose possession this document comes should inform themselves about and observe any such restrictions. Any failure to comply with these restrictions may constitute a violation of the securities law of such jurisdictions.

You should not apply for the purchase of shares except on the basis of information set out in (a) this offer document and (b) all information provided on the offer at [www.rippleenergy.com](http://www.rippleenergy.com), including the Customer Agreement. Before applying you are advised to read the whole of this offer document, including the Risk Factors set out in **Section 14** and the information provided on the offer at [www.rippleenergy.com](http://www.rippleenergy.com), including the Customer Agreement.

Applicants should understand that any investment they make is an acknowledgement of their support for the development of renewable energy and accordingly, a subscription for shares in the Co-Pilot Wind Project should be primarily regarded as an investment for social and environmental purposes rather than one which will produce a significant financial return.

You should also consider taking appropriate financial and other advice before making any investment decision.

For general queries about this offer document, please contact [help@RippleEnergy.com](mailto:help@RippleEnergy.com).



# Contents

<b>03 Directors' letter</b> .....	<b>5</b>
<b>05 How it Works</b> .....	<b>12</b>
<b>06 Wind Energy in the UK</b> .....	<b>18</b>
<b>07 About Ripple</b> .....	<b>21</b>
<b>08 The Project</b> .....	<b>22</b>
<b>09 The Co-operative Society</b> .....	<b>24</b>
<b>10 Indicative Project Programme</b> .....	<b>27</b>
<b>11 The Shares</b> .....	<b>28</b>
<b>12 The Team</b> .....	<b>31</b>
<b>13 Financial Information</b> .....	<b>34</b>
<b>14 Risk Factors</b> .....	<b>38</b>
<b>Appendix 1</b>	
<b>Key Facts &amp; Glossary</b> .....	<b>40</b>
<b>Appendix 2</b>	
<b>General Information on</b>	
<b>Co-Pilot Wind Project Ltd</b> .....	<b>42</b>
<b>Appendix 3</b>	
<b>Information on Tax</b> .....	<b>43</b>





## 03 Directors' Letter

We are really excited that you are interested in finding out more about joining the co-operative society which will own and operate the Graig Fatha wind turbine. This document sets out the information you need to make an informed decision about taking part in this innovative clean energy ownership opportunity.

### **Graig Fatha represents a new way to source clean energy**

Until now if you wanted to own your own source of clean electricity, typically your only option was to install solar panels on your house. Rooftop solar can be great but it can also be expensive and isn't an option for people who live in flats or who rent. And if you move home you have to leave it behind. Graig Fatha (pronounced 'Graig Vatha') represents a new way to act on climate change by bringing people together to build and own their own source of clean, renewable electricity.

As Directors of the Co-Pilot Wind Project we are proud to play a part in this ground-breaking scheme. Graig Fatha will be the first large scale wind turbine in the UK to be co-operatively owned by the people who will benefit from its clean, green electricity. By investing in Graig Fatha you can bring a new form of climate action into the mainstream and be part of a community that is pioneering a different future for energy.

### **What your investment will be used for:**

Your investment in the Co-Pilot co-operative society will be used to build the Graig Fatha wind turbine. It is 2.5MW and is likely to be able to supply the equivalent of around 2000 households.

The cost of building the wind farm includes buying the turbine, preparing and building the foundations, buying the permitted project from the developer and employing the construction team. Alongside your investment you will also pay Ripple Energy an arrangement fee, of 5% of the project cost, which will contribute to some of the legal, transactions and set-up costs for the project. This is taken into account in the upfront cost you will be quoted on Ripple's website before you agree to join, there are no additional hidden fees or charges.

### **Graig Fatha Benefits**

As well as helping to generate renewable power from a large-scale wind turbine, Graig Fatha ownership can also help save you money on your electricity bills for the life of the project. By buying shares in the wind farm you are allocated a proportionate share of its generated power, and hence the value of that power. The more shares you own, the more power is allocated to you.

The way we use energy is changing and we want the Co-Pilot co-operative to support you in your low carbon journey. In addition, Graig Fatha will deliver benefits to the local community and reduce CO2 emissions by 1,700 tonnes<sup>1</sup> per annum – over 700kg per average home.

We believe this innovative project is truly of its time and will create benefits for you, the community and the environment. We hope you join us in this mission.

---

<sup>1</sup> Based on P75 generation estimate and grid carbon intensity of 255kg/MWh.



A photograph of a man and a woman sitting on a couch, laughing heartily. The man is on the left, leaning back, and the woman is on the right, also leaning back. They are both smiling broadly. The background is a plain wall with a lamp visible on the right. The entire image is overlaid with a semi-transparent purple filter.

“

**We believe this innovative project is truly of its time and will create benefits for you, the community and the environment.**

**We hope you [join us](#) in this mission.**



## 04. Summary Information

**This document contains details of the proposed Graig Fatha wind turbine and how to buy shares in the Co-Pilot Wind Project Ltd co-operative society.**

### The Co-op

The Co-Pilot Wind Project Ltd co-operative society ('the co-op') was formed on 9th October 2019 (Reg no. 4640). Its mission is to enable people to own shares in a renewable energy project that can reduce their carbon footprint, help reduce their electricity bills as well as create local environmental and community benefits.

Electricity bill savings arise by the co-op selling the power generated by the Graig Fatha wind turbine at a reduced cost to licensed electricity suppliers who will in turn pass the savings to their customers who are members of the co-op.

The co-op members will have one vote each and a board will be elected by the members.

### The Offer

This document contains an invitation to invest in the withdrawable, non-transferable share capital of Co-Pilot Wind Project Ltd. We are seeking to raise £4.326m by end of July 2020 to invest in a 2.5MW wind turbine to be constructed in South Wales.

The financial information in this document (including projected returns to members) is calculated using the assumptions stated in

**Section 13.** It is projected that the payback period for investment would be 14 years. According to our modelling, someone buying enough shares in the co-op to generate 2.9MWh is projected to receive savings of about £85 in the first year of generation, and an average of £134 saving per annum over the project's life<sup>2</sup>.

The co-op will repay members' share capital, and trading benefit, in the form of savings on the members' electricity bills from licensed supply partners of the project<sup>3</sup>. That said, please note that any savings will be highly dependent on the wholesale price of electricity and the wind turbine's yields, which will depend on the wind, as we describe in more detail in **Section 14** on Risk Factors.

If we are unable to raise the capital funds through the share offer in time and as a result are unable to proceed with constructing the turbine, we will return all funds to applicants.

---

<sup>2</sup> Based on P75 (see Glossary) and UK Government Central Scenario (see footnote 7)

<sup>3</sup> See **Section 5 "How it Works"** for further explanation





## Timetable<sup>4</sup>

June	Share Offer launch
July	Share Offer closes project contracts exchanged
August	Turbine lead-in time starts Pre-construction preparation
September	Access track works start
October	Crane hardstanding construction
December	Grid connection works
January 2021	Turbine foundation poured
February	Control building construction
March	Turbine delivery
April	Turbine starts to generate savings for members



<sup>4</sup> This programme is indicative and subject to change, especially in light of Covid 19.

## Overview of the Financial Model<sup>5</sup>

System	
Capacity (MW)	2.5
Yield (MWh) (p75)	6,681
Total MWh generated (25 years)	167,025
Total purchase and construction cost (£)	4,120,000
Ripple arrangement fee (£)	206,000
Carbon Savings	
CO <sub>2</sub> kg/kwh (grid)	0.255 <sup>6</sup>
Annual tonnes of CO <sub>2</sub> saved	1,707
Total tonnes of CO <sub>2</sub> saved (25 yrs)	42,691
Annual CO <sub>2</sub> saving of member with share based on 2.9 MWh demand (kg)	740
Operating Finances	
Average wholesale price <sup>7</sup> received (£/MWh)	£58.00
Rego and embedded benefit value received (£/MWh)	£7.00
Total average value (wholesale price + REGO)	£65.00
Average project operating cost (£/MWh)	£20.00
Expected average saving achieved by the project per MWh (£)	£45.00
Member's Projected Savings Example – assuming ownership of 2.9MWh	
Total value of 2.9 MWh (2.9 x £65.00)	£188.50
Value allocated to project to cover operating costs (2.9 MWh x £20)	£58.00
Saving applied to member's electricity bill for the year (2.9 x £45.00)	£130.50

**Note:** the current wholesale power price is below the average shown in the table. Prices have fallen substantially over the last 6 months, this is partly as a result of coronavirus, lower oil and gas prices and lower demand combined with high wind output. For more information about the risks associated with power prices, please read **Section 14** on Risk Factors.

<sup>5</sup> See Key Facts and Glossary for an explanation of some of the terms used.

<sup>6</sup> See **UK Gov Greenhouse Gas Conversion Factors**. Note that projections of grid carbon.

<sup>7</sup> Years 2021-2035, **UK Gov central scenario, Annex M**, note currently wholesale prices are below, this, driven partly by corona virus impacting the oil price and reducing economic output. The price assumed for 2022 is the average of the price secured for 2021 and the UK Gov forecasts. For years beyond 2035 the price has been assumed to be an average of the previous two years.



## Considerations

Any decision to apply for the shares should be based on consideration of this document as a whole including the Risk Factors set out in **Section 14**, the information provided on the offer at [www.rippleenergy.com](http://www.rippleenergy.com) and the Customer Agreement.

Technical and other words and phrases used in this offer document with a particular meaning are defined and explained in the Glossary and Key Facts, Appendix 1. No advice on investments is given in this document, or by the promoters in relation to it. If any person has any doubt about the appropriateness or suitability of the investment which is the subject of this offer document he/she should contact an appropriate authorised person for advice on investments.

Applicants should understand that any investment they make is an acknowledgement of their support for the development of renewable energy and accordingly, a subscription for shares in the Co-Pilot Wind Project should be primarily regarded as an investment for social and environmental purposes rather than one which will produce a significant financial return.



The initial offer period is for 6 weeks. At the discretion of the board, the offer may be extended for a period or periods of 6 weeks.

Any complaints about this offer or about the shares should be sent to the Chairman of Co-Pilot Wind Project, c/o Ripple Energy, Creative Works, First Floor, 7 Blackhorse Lane, London E17 6DS.

How to apply: the application process is online only and available at [www.rippleenergy.com](http://www.rippleenergy.com)



A woman with long hair, wearing a light-colored t-shirt, is looking up towards a large wind turbine. The background is a solid teal color. The wind turbine's blades and tower are visible on the left side of the frame. The woman is positioned on the right side, looking towards the turbine.

“

Part-owning a wind farm with **Ripple** is one of the easiest ways to reduce your carbon footprint with very little change to your day-to-day life.



## 05. How it Works

By buying shares in the wind farm you are allocated a proportionate share of its generated power, and hence the value of that power. The more shares you own, the more power is allocated to you.

We expect many people to determine how many shares to buy so that their share of the power generated roughly equates to the amount of electricity they use. But you can own as little as £250 worth or as much as would be expected to provide 120% of your annual consumption.

The supply partner for Graig Fatha is Co-op Energy, which is powered by Octopus Energy. **When joining the co-op you will need to switch to Co-op Energy, if you are not already their customer.** As well as having a choice of all Co-op Energy's tariffs you will also be able to switch to Octopus Go or Octopus Agile tariffs at a later point if you wish. If you are already on an Octopus Energy, M&S Energy, Affect or London Power tariff there is no need to switch to Co-op Energy, you can remain on your existing tariff.

Octopus will purchase your share of the wind farm's output and supply it to your home via the grid under either the Co-op Energy or Octopus Energy brand, depending on your chosen tariff.

Octopus will pay the co-op for the electricity generated at the wind farm's operating cost. At about £20 per MWh this cost is lower than the wholesale market price for electricity which is likely to be about £65 (including REGO and embedded benefit value<sup>5</sup>).

The difference between the price paid to the co-op and the expected average wholesale price over the life of the wind farm represents a saving of about £45/MWh. You receive this saving for each MWh of electricity your share of the wind farm generates. Octopus passes that saving on to your electricity bill.

This saving is how you benefit from your membership of the co-op. Part of your saving is return of share capital, and part is trading benefit.

It is the intention that 5% of the shares issued in this offer will be withdrawn each year of the turbine's operation. The value of those share withdrawals will form part of your savings and will not be taxable. The remainder of the savings will be potentially taxable as your trading benefit as a member of the co-op. In the event the savings in any year are less than the value of the equivalent of 5% of the share capital, a larger proportion of shares will be withdrawn in following years (if the savings are sufficient) so that the 5% per annum cumulative position is achieved on an average basis. You will only see one single figure as your saving on your bill, but you can view the split of saving on your customer dashboard on Ripple's website and app and in your annual tax statement.

Ripple is the co-op's managing agent. It takes care of everything from facilitating the purchase of shares, managing the contractual interfaces between the co-op and the wind farm's construction and operations and maintenance contractors, setting up arrangement with the energy supplier, and managing communications with co-op members.

## How much to own and how much do I pay?

You may decide how many Watts you want to own according to how much electricity you use each year, and how much of it you want to be met from your wind farm.

The generating capacity of the wind turbine is measured in Watts. The Graig Fatha wind turbine is made up of 2,500,000 Watts (2.5MW). The upfront cost, including the purchase and installation of the turbine, foundations, purchase of the consented project from the developer, and repayment of transaction costs is a total of £4.12m, which for the 2,500,000 watts of the project works out as £1.65 per watt (165 shares per watt).

Wind analyses forecast the expected output from the turbine. As part of the sign-up process, Ripple's calculator may help you determine your ownership requirement based on the long term P75 wind forecast from the project and your anticipated electricity demand. The P75 estimate is 6,681,000kWh. As the project consists of 2,500,000 watts, that means there is a 75% probability that each watt of the wind turbine will generate at least 2.7kWhs of electricity in an average year (output will vary from year to year based on weather patterns and maintenance outages).

If, for example, you have a medium to high electricity consumption and use 3,400kWh of electricity each year, you would need 1,273 watts to meet your electricity needs from the wind turbine. Given the £1.65 cost per watt, the cost of those shares would be £2,100. You would own 210,000 shares.

If you only wanted to meet 50% of your electricity needs from the wind farm, you would need half, the equivalent of 636 watts. You would need to purchase 105,000 shares, which would cost you £1,050.

Ownership levels are flexible. You can own the equivalent of as many watts as would be expected to generate up to 120% of your annual electricity consumption, or as little as the equivalent of £250.

You pay the share capital for the number of shares you want to own into the co-operative. This share capital is then used by the co-op to pay for the construction of the wind farm.

An arrangement fee of 5% will be added to the cost of your shares when you go through the application process.





**A worked example – if you want to purchase enough shares to cover your projected consumption**

The Graig Fatha turbine is projected to generate 6,681,000 kWh per year<sup>8</sup>.

If your projected electricity consumption is 2900kWh per year, that would equal 0.04% of the turbine's projected output.

You would therefore need to own 0.04% of the watts of the turbine, which equals 1085 Watts, for your share of the wind farm's generation to cover your consumption.

You'd need to buy 0.04% of the shares in the co-op to own 0.04% of the Watts of the wind farm.

Each watt costs £1.65 so you buying £1,790 of shares would get you 1085 watts. Each share is £0.01 so you would own 179,000 shares.

This is 0.04% of the 412,000,000 shares of the co-op.

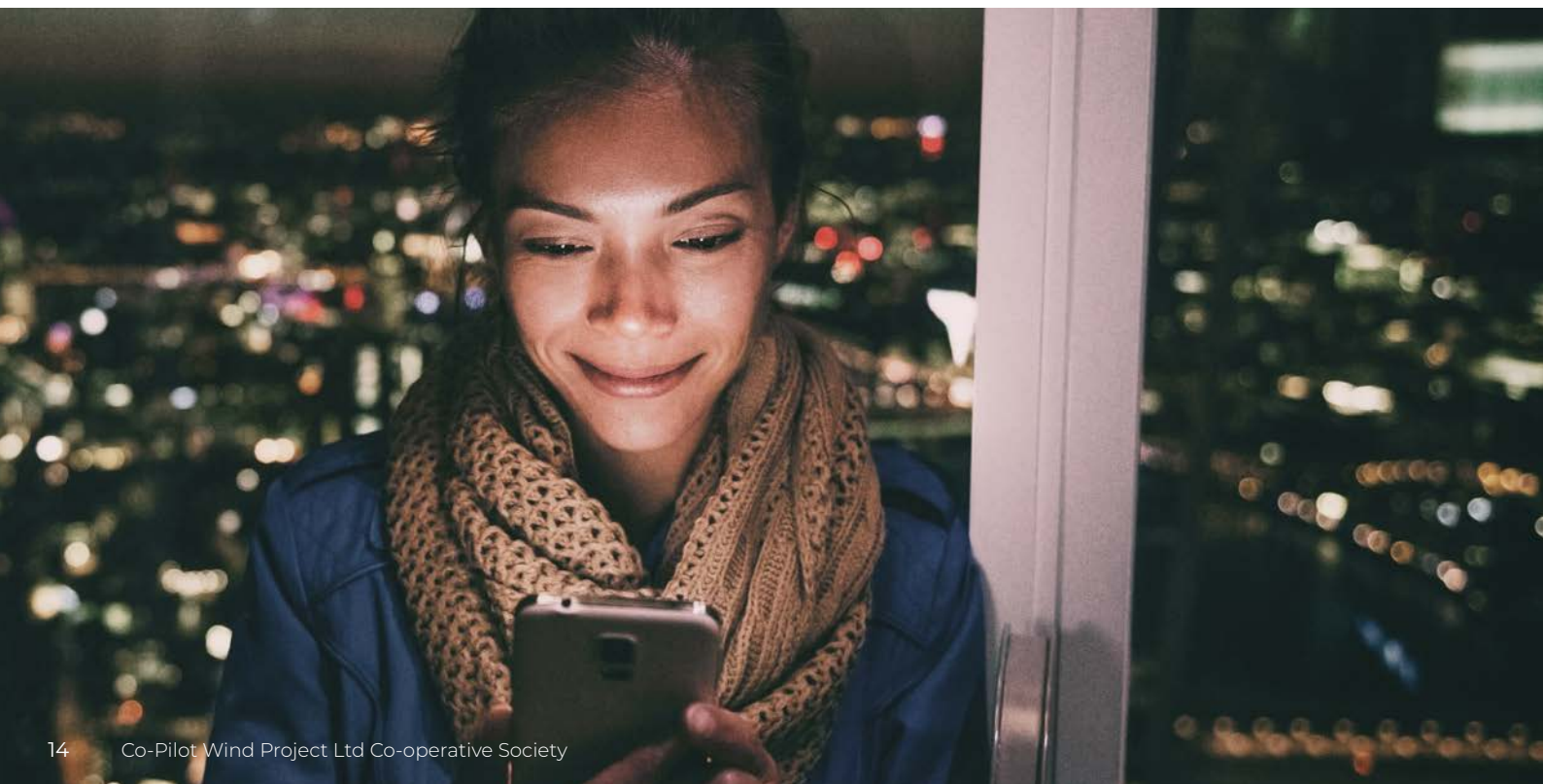
The share capital you contribute would be the equivalent of 0.04% of the £4.12m capital cost of the wind turbine project.

You would be entitled to 0.04% of the electricity the wind turbine generates each year. There is a 75% probability that your share would generate 2,900kWh or more. If so, this would be enough to cover your consumption.

Of course, we cannot predict with certainty how much wind there will be or therefore how much income the co-op will generate, which is why we use probabilities.

---

<sup>8</sup> P75 estimate



## What benefits do I get from my share ownership?

With Ripple you do not get 'dividends' from your share ownership. The benefit of co-op membership is low cost, clean electricity. You can realise savings on your bill as a result of being a member of the co-op and owning part of the wind farm.

There are two main costs of a wind farm, the construction cost (turbine, construction, purchasing the project etc) and the operational costs (maintenance, insurance, land rent, business rates etc). Ripple charges an ongoing management fee for managing the operations and relationships between the co-op, its members and the wind farm's various contractors. It is paid by the wind farm and forms part of the operating cost.

The construction cost is the biggest cost item, which the co-op pays upfront. The wind farm therefore only needs sufficient ongoing revenues to cover its operating costs each year.

Your share of the wind farm's generation will be sold to Ripple's supply partners, Co-op Energy and Octopus Energy<sup>9</sup>. Octopus buys the electricity at the wind farm's operating cost rather than the market price for electricity.

**(market electricity price – wind farm operating cost) x your share of generation = your saving**

**If your share generates 2900kWh over a year and the operating cost is about 2p/kWh and the value of the power is 6.5p/kWh then:**

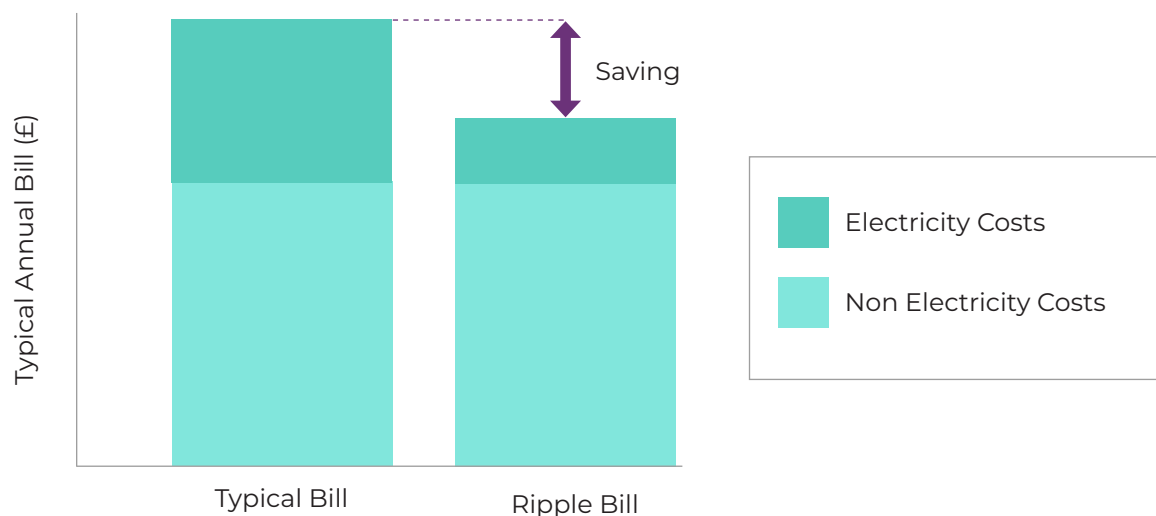
**$(6.5p - 2p) \times 2900kWh = £130.50 =$  your saving.**

The difference between the market price and the operating cost equates to your saving from your share of the wind farm's generation. It is passed on to your bill according to how much electricity your share of the wind farm generates each month.

Your regular bill would be set based on the market price for electricity according to the tariff you are on, like any other customer. However, Octopus is able to buy your share of the wind farm's electricity at a lower price. That saving is passed on to you, via your Co-op Energy or Octopus bill, under the terms of the Customer Agreement. Ripple calculates the amount of saving each month and ensures it is credited to your bill. You will also be able to see the saving in your Ripple customer dashboard. The following diagram illustrates how it works.

<sup>9</sup> Note that Octopus Energy powers both the Octopus and Co-Op Energy brands, so Octopus Energy will purchase electricity from Graig Fatha on behalf of members on both Octopus and Co-Op Energy tariffs.





Note that the savings on your bills will be independent of your electricity demand. Whatever savings your share of the wind turbine's power generates will be applied to your electricity bill, regardless of whether you use lots of electricity or none. If the savings on your bill at any one time exceed the total cost of your bill your supplier may hold the excess savings as credit on your account.

In the first year of generation the only tariffs available to members of the co-op who were not already on an Octopus Energy, M&S Energy, Affect Energy or London Power tariff will be those offered by Co-op Energy and the Agile and Go tariffs from Octopus

Energy. Ripple is however expected to add additional supply partners in time. The directors anticipate therefore that you will be able to switch to these other suppliers if you wish, after the first year of the wind farm's operation.

If you choose a non green tariff with your chosen supplier, the REGOs (Renewable Energy Guarantees of Origin) attributed to your share of the power generated will be retired instead of passed to your supplier. This will avoid those REGOs being used to qualify someone else's electricity as being green.

### Ripple Energy

Ripple is the co-op's managing agent. It will manage the construction and operation of the wind farm on behalf of the co-op and its members. It does not undertake the construction or operations and maintenance itself but manages experienced and trusted contractors to do so.

Ripple will also manage the platform that will show you how much of the project you own, what savings you have received and what's happening at the site and with the co-op.

## How to apply

To apply for shares in the co-op follow the steps on Ripple's website [www.rippleenergy.com](http://www.rippleenergy.com). On the site you can use the calculator to get an idea of how many shares you would need to own to meet your electricity needs. You should decide how many shares you want based on your actual electricity use (found on your electricity bills) rather than the calculator. As part of the share purchase process you will need to join the co-op and switch to Co-op Energy or Octopus Energy to enable you to get the savings from your wind farm applied to your electricity bill. Ripple facilitates and manages the whole process on behalf of the co-op and its members.

## Offer Timetable

The offer will be open for 6 weeks, or until all the shares are sold, whichever is the sooner. The board may decide at its discretion to extend the offer period for further 6 week periods.

When you join the co-op a share certificate will be issued to you along with a customer agreement completed with your details and your payment will be held in an account owned by the co-op. If the share offer is successful and enough capital is raised, you will be notified, and the co-op will use the capital to purchase the project and progress with construction. If the share raise is unsuccessful all funds will be returned to the members.

## Q&A

Ripple's [FAQ webpage](#) has further information about the model

## Co-op Energy & Octopus Energy

You have to switch to Co-op Energy or Octopus Energy, Ripple's supply partners for Graig Fatha, to secure savings on your electricity bill. Initially they will be the only supply partners for the project but Ripple plans to add more in time. Our aim is that after 12 months of operation of the wind farm you will be able to switch to alternative supply partners if you wish and your savings will be applied to your bills with your new supplier instead.



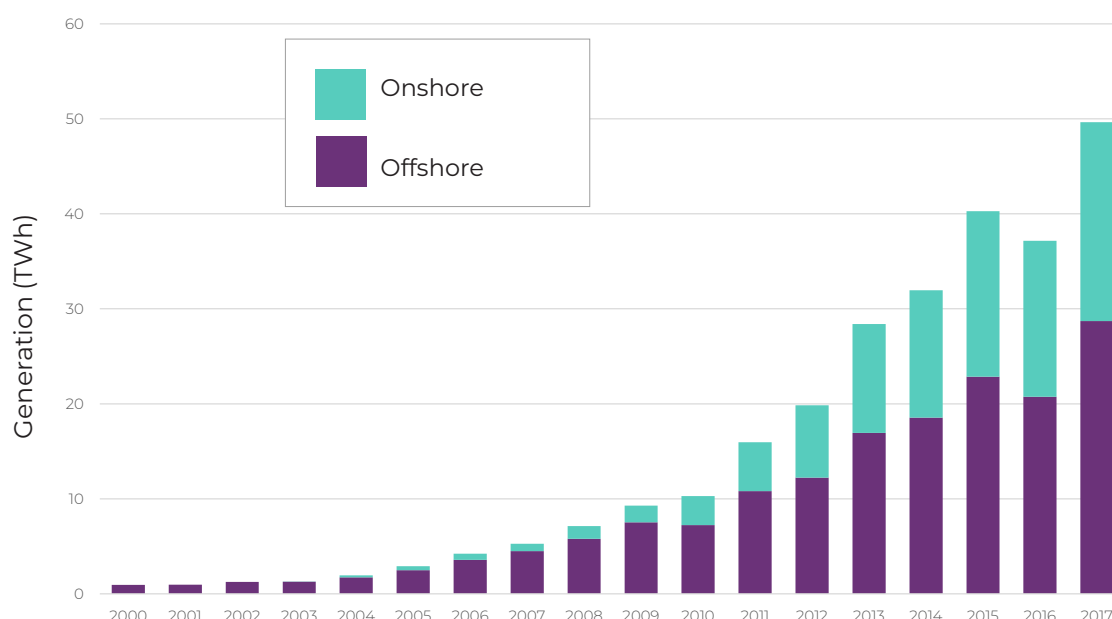


## 06. Wind energy in the UK

The UK's wind energy sector has grown from less than 0.3% of the UK's electricity supply in 2000 to 20% in 2019. In February 2020 the UK's fleet of wind turbines generated more

electricity than the UK's gas and coal fired power stations combined. There are currently more than 8500 onshore wind turbines and over 2000 offshore wind turbines in operation across the UK<sup>10</sup>.

### UK Wind Generation



Source: UK Digest of Energy Statistics, 2019

Since 2015 the cost of onshore wind has fallen from around £90/MWh to £40.50/MWh<sup>11</sup> (approximately 55%). Onshore wind is now one of the UK's cheapest sources of electricity<sup>12</sup> and an established, mainstream source of electricity in the UK and around the world. The variability of wind is illustrated in **Section 13** and its effects on financial returns is in **Section 11**.

The UK needs to reach net zero emissions by 2050. To achieve that, the UK's electricity supply needs to be largely decarbonised by 2030<sup>13</sup>. A huge growth in clean, renewable energy is needed over the next decade.

Wind farms do not produce any CO<sub>2</sub> when they generate electricity. There are some

CO<sub>2</sub> emissions associated with the manufacture of the turbines, their installation and operations and maintenance activities. However, on a full lifecycle basis, onshore wind is the source of electricity with the lowest CO<sub>2</sub> emissions. It is estimated that full life cycle emissions are just 8kgCO<sub>2</sub>/MWh. This compares to 940kg/CO<sub>2</sub>/MWh for coal and around 400kg/CO<sub>2</sub>/MWh for gas.

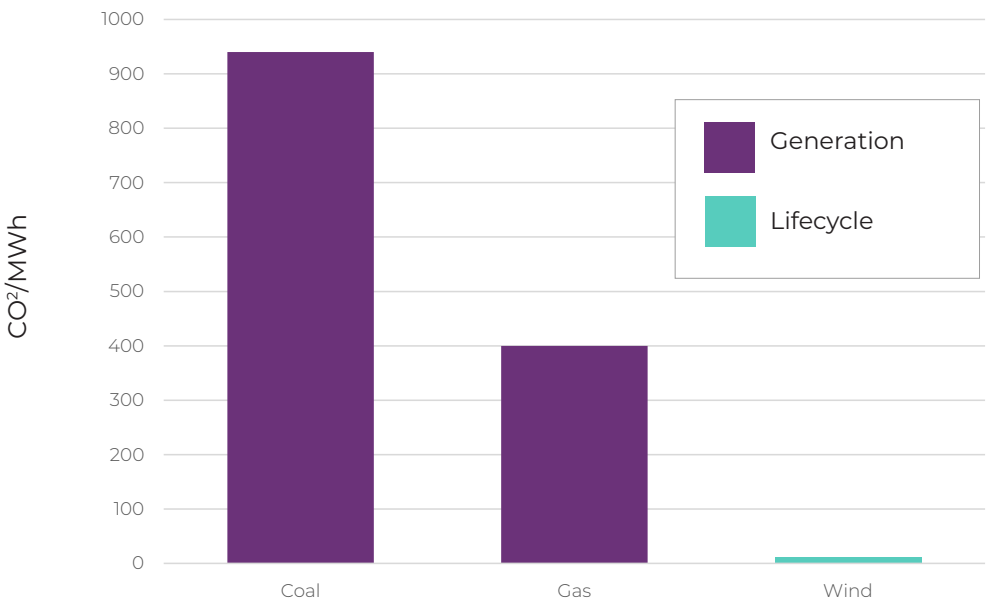
<sup>10</sup> Source: RenewableUK UK Wind Energy Database, correct at 17.03.20

<sup>11</sup> Source: All in 2020 prices, based on CFD contracts award in 2015 allocation round, compared to proposed maximum bid price for onshore wind in CFD draft allocation plan 2020 of £34/MWh in 2012 prices.

<sup>12</sup> Proposed maximum bids in CFD allocation round 4 has solar maximum bid as £33/MWh compared to onshore wind's £34/MWh.

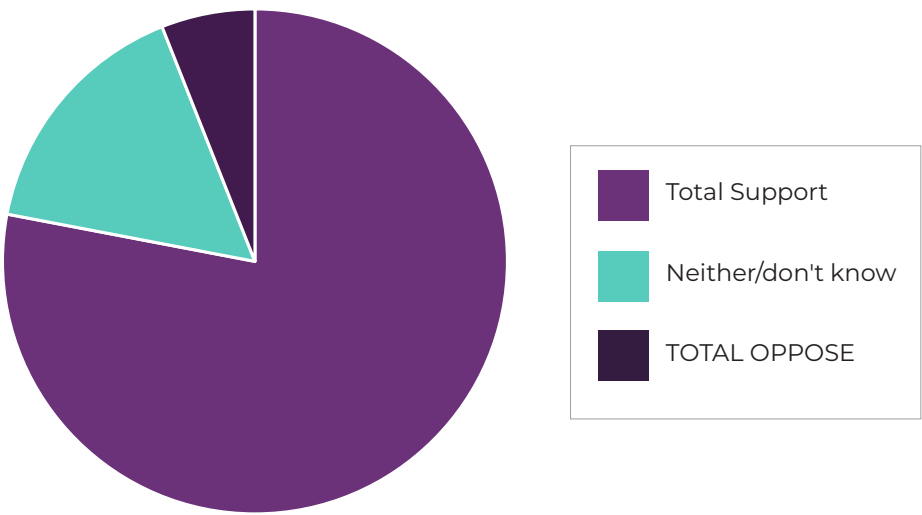
<sup>13</sup> Committee on Climate Change **Fact Sheet, 2014**

## CO2 emissions



Onshore wind is also one of the most popular forms of generation with 78% of the British public in favour of it. 80% of British people are concerned about climate change<sup>14</sup>. It is clear that people want to see more wind farms built in the UK. Ripple enables you to help make that happen.

## Support for wind



The shift to wind and solar power unlocks new ownership structures. It's not possible for someone to own a bit of a coal, gas or nuclear power station to supply their electricity. It is possible, however, for someone to own a share in a co-op which owns and runs a wind farm or solar park and to benefit from reduced electricity bills as a result. This is what Ripple wants to achieve and Graig Fatha is the first wind farm for this to be a reality.

<sup>14</sup> BEIS Public Attitudes Tracker – Wave 29, March 2019.



“

**Ripple's mission is to transform the ownership of the world's clean energy assets**

**Ripple believes its ownership model can make clean energy ownership affordable and accessible to everyone.**



# 07. About Ripple

## Ripple's mission:

Ripple's mission is to transform the ownership of the world's clean energy assets, enabling consumers to own the assets they rely on. It wants to give people the power to create the clean energy future they want to see by enabling them to contribute towards the deployment of new wind farms in the UK.

The Graig Fatha project is the first time this ground breaking new ownership model has been implemented in the UK. It aims to prove that a new form of ownership, with consumers at its heart, is possible. Ripple believes its ownership model can make clean energy ownership affordable and accessible to everyone, everywhere. For the first time ever in the UK it enables individual energy consumers to co-operatively own their own source of clean electricity, supplied to their homes via the grid.

## Why Ripple?

Ripple enables you to act on climate change by directly increasing the amount of clean, renewable electricity in the UK's electricity system. You can also reduce your electricity bills and own an asset you rely on through your shares in the co-op.

Graig Fatha is Ripple's first step in its mission. Joining the Co-Pilot wind farm project, you will be joining energy pioneers across Britain to show a new form of climate action and energy ownership is possible.

## The background to Ripple

Ripple was set up by Sarah Merrick in 2017. After working in the renewable energy sector since 2000 she wanted to give people the opportunity to own their own source of renewable power. Large corporates have been able to own their own source of renewable energy for a number of years; she wanted ordinary household energy consumers to be able to do the same.

Ripple has grown from three people in 2019 to 8 people in 2020. Ripple is a privately owned company. It is largely funded to date through crowdfunding having secured £856,000 in investment on the Seedrs crowdfunding platform in summer 2019. Over 1000 individuals invested in Ripple. This enabled it to grow its team and prepare for the launch of the Co-Pilot project.

## Awards

Ripple won Start up of the Year 2019 in the Seedrs Alumni awards and also in the Business Green Technology Awards.

## 08. The Project

The Graig Fatha turbine will be located at Graig Fatha farm on the hill to the west of Coedely near Tonyrefail in Rhondda Cynon Taff in the south of Wales. It will form a natural addition to the existing Mynydd Portref wind farm and its extension project. The land is currently used for rough grazing by the local farmer, but there is a strong history of energy related activity in the area with the landscaped Coedely coal mine and tip located very close by.

The turbine will be a Vensys100, formed of a 100m rotor (the blades are each 50m long) on a 75m steel tower, so will be 125m to its tip height and will be able to generate up to 2.5MW of electricity.

The project was developed by Clean Earth Energy who are based in Cornwall. They submitted a planning application for the turbine in April 2017 and planning permission was granted by the Rhondda Cynon Taff Council in March 2018. Since then Clean Earth, and subsequently Ripple Energy,

have been finalising legal documents, commissioning site investigation works and producing detailed designs for construction.

The total project cost of £4.12m includes the purchase price of the project, the cost of the turbine, the access track and crane hardstanding, the electrical works and grid connection and land costs. Construction and operational contingency sums have been included to ensure the co-op has enough funds from the outset to cover any unexpected costs. Any unused contingency funds will be held by the co-op and used towards operational costs, enabling more savings to be passed to the members.



Once the share offer has successfully completed, the project contracts will be exchanged and construction will be timed to start so it is completed in time for the turbine delivery. The construction process will be managed by Locogen, a consultancy that specialises in managing projects of this scale. The civil works, consisting of building the track up the hill, the hardstanding by the turbine for use of cranes, and the turbine foundation, will be undertaken by Knights Brown who are highly experienced in projects of this type. The electrical works will be carried out by Sancus Utilities who have extensive experience in a wide range of electrical installation projects, and the connection to the 11kV grid network by Coedely will be the responsibility of Western Power Distribution.

Once the turbine is constructed Locogen will help manage the asset and Vensys will be responsible for the turbine's operations and maintenance.

Ripple will manage all the contractual relationships the co-op has on behalf of the co-op throughout the project life, under the terms of the management agreement between Ripple and the co-op.



Octopus Energy and Co-op Energy will be responsible for members' electricity supply in the same way as they would for any other customer.

In addition to passing savings to the society's members, the project will provide a community benefit fund which we hope to fund with £3,000 per annum from surplus profit from the wind farm, or an equivalent lump sum, available to support local actions to address fuel poverty and carry out environmental projects.





# 09. The Co-operative Society

## Why a co-operative society?

Co-operatives enable people to do together what they can't do alone. That approach matches Ripple's mission perfectly, so a co-operative ownership structure is the logical choice for Graig Fatha.

The cost to develop and construct a single wind turbine is around £4m and it is able to produce enough electricity each year to meet the needs of 2000 households. As an individual you can't own a whole large scale wind turbine on your own, nor would you need or want to.

Energy is all about scale. There are huge economies of scale, with large scale assets being able to produce electricity at a much lower unit cost than small scale ones. A co-operative enables you to split the cost of a large asset with others, giving you access to collective economies of scale. This enables you to, collectively, access electricity more cheaply than would be possible alone.

## Voting rights

Every member of the co-operative society gets one vote in all votes, regardless of how many shares they own. This gives everyone a genuine say in all important decisions regarding the wind farm.

## Elections

Once the co-op is fully subscribed and all the available shares have been issued, there will be an election for the Board at the co-op's first AGM. The founding Board members (the Directors of the co-op listed in this document) will resign and a new Board will

be elected. The majority of the Board will be elected by the members from within the membership, alongside up to two directors appointed by Ripple and a further two directors "co-opted" to the Board on the basis of specific skills required by the Board.

## Use of proceeds

The share capital will be used to fund the construction of the wind farm. Any remaining funds shall form operating contingency.

## Withdrawing shares

All shares in the co-op are withdrawable, at the discretion of the Board.

A percentage of each member's shares will be withdrawn each year automatically, as part of savings on members' electricity bills. The board expects to repay 5% of share capital each year in this way.

Should you wish to withdraw all of your shares, because you no longer wish to be part of the co-op, you need to contact Ripple via the customer dashboard, giving at least 30 days' notice. Ripple will maintain a waiting list of members wishing to increase their share ownership. If the waiting list for shares is greater than the number you wish to withdraw, you will be able to withdraw your shares. The corresponding number of new shares will then be issued to those members wishing to increase their ownership.

If the waiting list for shares is lower than the number you wish to withdraw, you may not be able to withdraw your shares at that time. The Board will consider whether any additional sum required to repay your residual share value can be safely and fairly met from the co-op's reserves. If they cannot, the residual value of your shares will be calculated at that time and will be paid to you when the Board considers it is able to do so safely.

Withdrawal amounts will be calculated by reference to the residual value of shares. The value life of the wind farm is five years less than the expected operating life, i.e 20 years. Each year the Board expects to repay 5% of share capital to each shareholder. If that repayment is achieved the co-op will withdraw 5% of the shares. So, if you wish to withdraw your shares after 5 years, 25% of your share capital should have been repaid by that point as part of the savings on your bills and 25% of your shares will have been withdrawn by the co-op. The residual value would therefore be 75% of your initial share capital, meaning you would be withdrawing 75% of your original investment if you chose to withdraw all your shares.

**No shares can be withdrawn in the 24 month period from being issued,** except for those automatically withdrawn as part of savings on members' electricity bills.

It is not possible to request a partial withdrawal of shares.

**All withdrawal requests are subject to a withdrawal fee of £50.**

### **Shares are non-transferable**

Shares in the co-op are non-transferable, except upon death. This means you are not able to sell your shares to someone else.

If you wish to withdraw your shares, an equal number of new shares issued by the co-op will be made available to people on the waiting list. If you move home then you can still keep your shares.

### **What if you die?**

Shares are only transferable in the event that you die whilst a member. You can assign someone to inherit your shares upon your death. Your shares will then transfer to that person, should they wish to accept them, upon your death. Please keep the contact details for the named contact up to date on your customer dashboard and make them aware of your wishes.

### **Level of involvement**

The co-op is a democratic society, run for its members by its members. We want you to be as involved as possible and we will make it as easy as possible for you to participate. For example, all member meetings, including the Annual General Meeting will be held virtually via the internet. You will be able to join via your computer or by phone. This means everyone can participate, regardless of where in the country they live. It will also avoid the cost and emissions of people having to travel to meetings.

If you don't wish to participate there is no requirement to do so.

### **Co-op Rules**

The co-op rules can be accessed on the Financial Conduct Authority's website [here](#). Those rules set out how the society will conduct itself, and include the details of member meetings, director elections, and other formal matters.

## Customer Agreement

In the joining process you will be required to agree to the terms of the Customer Agreement which sets out in detail the terms of your ownership of shares in the society, the payments due to you and from you, and how Ripple will manage that relationship. A copy of the Customer Agreement will be available to view on Ripple's website before you agree to join.

The Customer Agreement, along with the Co-op's rules and this offer document together constitute the terms and conditions of the offer.

The key terms of the Customer Agreement include:

- how you become a member of the co-op by applying to purchase shares through this offer, including the requirement to pay the joining fee (clauses 4, 7 and 9);
- how your savings are calculated, including via a withdrawal of your share capital (clause 10 and Schedule 1);
- how can apply for additional shares, also expressed in watts (clause 12)
- in what circumstances and how the board might ask you to contribute more share capital to the co-op (clause 13) in what circumstances the agreement might be terminated and your membership of the co-op ceases (clauses 21 and 22)
- the minimum term of the agreement – 2 years (clause 7 and 21)
- your right to change your mind up to 14 days after joining (clause 5)

## Ripple Management Agreement

The key terms of the Management Agreement are:

- A description of the services provided by Ripple to the co-op, such as construction management, managing the operations of the wind farm, liaising with energy suppliers and communicating with members on behalf of the co-op;
- A description of the fees paid for those services;
- The circumstances under which the board can terminate the agreement, including if Ripple breaches the terms of the agreement

Applicants may contact the board or Ripple if they would like any further information on the Management Agreement.

## Renewable Rhondda

The co-op is delighted to be launching this innovative project in Rhondda Cynon Taff – a hub of Welsh renewable energy with developments in solar generation, anaerobic digestion, battery power and of course, wind farms. The council have been particularly ambitious having taken a range of measures to improve their energy efficiency performance and to use more renewable power, cutting emissions by 40% over five years.

## Community Benefit Fund

The co-op will work with the local community to determine the best approach to manage the community benefit fund, which we hope to make available with £3,000 a year with surplus profit from the wind farm, or an equivalent lump sum. We will seek to work with existing organisations so as not to replicate management structures. The intention is to focus the fund on fuel poverty actions or environmental projects, but we will be cognizant of other local needs when directing exactly how the fund is to be used.



# 10. Indicative Project Programme



# 11. The Shares

Issuer	Co-Pilot Wind Project Ltd																																																	
Target amount to be raised	£4,326,000 (including arrangement fee)																																																	
Status	Withdrawable and non-transferable																																																	
Eligibility	to be eligible for shares in the society, the member must be a named GB domestic electricity bill payer. We cannot accept members who are on pre-payment meters at this time. Note that only one person per address can become a member of the society.																																																	
Return on Investment	<p>The savings that members receive on their electricity bills will depend on the performance of the wind turbine and the wholesale price of electricity. The table below illustrates the equivalent potential return over 20 years in different energy yield scenarios (higher yields result in more savings, and hence higher return on investment):</p> <table> <tr> <th colspan="2"></th><th colspan="3">20 Year Return</th></tr> <tr> <th colspan="2">Energy Yield</th><th>P90</th><th>P75</th><th>P50</th></tr> <tr> <td rowspan="3">Electricity price Forecast<sup>15</sup></td><td>High</td><td>2.9%</td><td>4.3%</td><td>5.8%</td></tr> <tr> <td>Central</td><td>1.8%</td><td>3.2%</td><td>4.6%</td></tr> <tr> <td>Low</td><td>-0.5%</td><td>0.8%</td><td>2.1%</td></tr> </table> <p>Note that the expected operating life of the wind turbine is 25 years, and may last 30 years (for which a variation to the planning permission would be needed). The table below illustrates the equivalent potential return over 25 years in different scenarios:</p> <table> <tr> <th colspan="2"></th><th colspan="3">25 Year Return</th></tr> <tr> <th colspan="2">Energy Yield</th><th>P90</th><th>P75</th><th>P50</th></tr> <tr> <td rowspan="3">Electricity price Forecast<sup>15</sup></td><td>High</td><td>4.4%</td><td>5.7%</td><td>7.0%</td></tr> <tr> <td>Central</td><td>3.5%</td><td>4.7%</td><td>6.0%</td></tr> <tr> <td>Low</td><td>1.5%</td><td>2.6%</td><td>3.8%</td></tr> </table>						20 Year Return			Energy Yield		P90	P75	P50	Electricity price Forecast <sup>15</sup>	High	2.9%	4.3%	5.8%	Central	1.8%	3.2%	4.6%	Low	-0.5%	0.8%	2.1%			25 Year Return			Energy Yield		P90	P75	P50	Electricity price Forecast <sup>15</sup>	High	4.4%	5.7%	7.0%	Central	3.5%	4.7%	6.0%	Low	1.5%	2.6%	3.8%
		20 Year Return																																																
Energy Yield		P90	P75	P50																																														
Electricity price Forecast <sup>15</sup>	High	2.9%	4.3%	5.8%																																														
	Central	1.8%	3.2%	4.6%																																														
	Low	-0.5%	0.8%	2.1%																																														
		25 Year Return																																																
Energy Yield		P90	P75	P50																																														
Electricity price Forecast <sup>15</sup>	High	4.4%	5.7%	7.0%																																														
	Central	3.5%	4.7%	6.0%																																														
	Low	1.5%	2.6%	3.8%																																														

<sup>15</sup> UK Government wholesale electricity price forecasts (Annex M)

<https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2018>

Return on Investment	<p>The following table shows the expected point at which savings could be expected to exceed the price paid for shares under different energy yield and wholesale electricity price forecast scenarios.</p> <table><tr><th colspan="2"></th><th colspan="3">Breakeven Year</th></tr><tr><th colspan="2">Energy Yield</th><th>P90</th><th>P75</th><th>P50</th></tr><tr><td rowspan="3">Electricity price Forecast<sup>15</sup></td><td>High</td><td>14</td><td>12</td><td>11</td></tr><tr><td>Central</td><td>15</td><td>14</td><td>12</td></tr><tr><td>Low</td><td>20</td><td>17</td><td>15</td></tr></table> <p>A typical home buying 179,000 shares at a cost of £1,790 on the basis that they want their share of the project to generate about 2.9MWh per annum would receive the following average annual potential savings for the life of the project:</p> <table><tr><th colspan="2"></th><th colspan="3">Average Annual Saving (£)</th></tr><tr><th colspan="2">Energy Yield</th><th>P90</th><th>P75</th><th>P50</th></tr><tr><td rowspan="3">Electricity price Forecast<sup>15</sup></td><td>High</td><td>142</td><td>146</td><td>150</td></tr><tr><td>Central</td><td>130</td><td>134</td><td>138</td></tr><tr><td>Low</td><td>104</td><td>108</td><td>112</td></tr></table> <p>Note that at the time of the share offer launch electricity prices are less than predicted for the long term (partly due to coronavirus). Wholesale prices have fallen by 22% or £10/MWh between November 2019 and January 2020<sup>16</sup>. As a result, savings in the first year will be about £28/MWh rather than the expected £45/MWh in later years.</p> <p>The above forecasts do not include potential revenue from enhanced capacity market payments, demand side management benefits or other revenue streams that may apply in future.</p>			Breakeven Year			Energy Yield		P90	P75	P50	Electricity price Forecast <sup>15</sup>	High	14	12	11	Central	15	14	12	Low	20	17	15			Average Annual Saving (£)			Energy Yield		P90	P75	P50	Electricity price Forecast <sup>15</sup>	High	142	146	150	Central	130	134	138	Low	104	108	112
		Breakeven Year																																													
Energy Yield		P90	P75	P50																																											
Electricity price Forecast <sup>15</sup>	High	14	12	11																																											
	Central	15	14	12																																											
	Low	20	17	15																																											
		Average Annual Saving (£)																																													
Energy Yield		P90	P75	P50																																											
Electricity price Forecast <sup>15</sup>	High	142	146	150																																											
	Central	130	134	138																																											
	Low	104	108	112																																											
Withdrawal	Members are free to withdraw their shares in the society, but return of any remaining share value is at the discretion of the society board.																																														
Voting rights	One vote per member																																														

<sup>16</sup> Ofgem Electricity Prices: day-ahead baseload contracts – monthly average (GB) <https://www.ofgem.gov.uk/data-portal/all-charts>



## Target for the offer

The target amount to be raised by the offer is £4,326,000. The target is also the maximum amount that the offer can raise.

If the offer does not raise the target within 6 weeks of opening, the Directors may decide to extend the offer period for up to a further 6 weeks. If the target amount has not been raised by the end of that period, the Directors will assess whether another finance option, such as the underwriting facility described in this offer document, should be used to reach the target. If it cannot, the offer will end and the co-op will return all application funds.

## How are your savings applied to your bill?

Your bill savings comprise two elements: (a) repayment of share capital and (b) trading benefit. You will, however, only see a single saving figure applied to your electricity bill, with further detail provided by Ripple. The Board will aim to repay your share capital over the life of the wind farm. We will aim to repay 5% of your share capital per year.

Any savings above the amount needed to fund the repayment of share capital is your benefit of being a member of, or effectively 'trading' with, the co-op.

The repayment of share capital and the trading benefit will fluctuate each year. In years when the wholesale electricity price is high and/or output from the wind farm high, the benefit of being a member of the co-op will increase. In years when the wholesale price is lower and/or output from the wind farm is lower, the benefit of being part of the co-operative will be lower as well.

From a tax perspective the trading benefit (but not the repayment of share capital) is treated as interest. It will count towards your annual interest allowance, which means you may need to declare it as part of your tax return.



## 12. The Team: The Co-op Directors



### David Banks (acting Board Chairman)

David brings solid experience in **financial services** to the society, built up from over a decade in corporate finance and risk management roles in banking and insurance. He currently works in prudential risk at a UK-based bank and is studying towards the Chartered Banker Institute's Green Finance Certificate™.



### Luke Clark

Luke's background in **politics and communications** means he brings a broad set of skills to the board. He is currently director of strategic communications at RenewableUK, the trade body for the wind and marine energy sectors.



### David Clubb

Dave ensures the **Welsh context** is embedded in the co-operative's outlook. He has worked in renewable energy for 16 years and is a partner in Afallen, which focuses on sustainable communities and enterprises in Wales, having previously been Head of Renewable Cymru. He is a Welsh-speaker and participates in several national programmes related to energy and communities.



### Joanna de Montgros

Jo is the **technical expert** of the board with over 20 years' experience in commercialisation of renewable energy technology. Jo has worked on a wide range of project scales and is a specialist at analysing risks and mitigation strategies in transactions. Jo is a founding partner of Everoze, a renewable energy consultancy, and founder of Destination Zero which provides carbon reduction advice to businesses.

### Declaration

Co-Pilot Wind Project Ltd and its Directors are responsible for the information given in this offer document. Co-Pilot Wind Project Ltd and each of its Directors hereby declare that having taken all reasonable care to ensure that such is the case, the information contained in this offer document is to the best of its or his knowledge, in accordance with the facts and contains no omission likely to affect its meaning.

# The Team: The Ripple Directors



## **Sarah Merrick**

Is the CEO and Founder of Ripple, driving the company forwards and benefitting from her 20 years of experience in the wind industry.



## **Miklos Parrag**

Is the Chief Technology Officer of Ripple and is responsible for the design and management of the platform and its integration with electricity suppliers.



## **Simon Peltenburg**

Is Ripple's Chief Projects Officer and has been managing the co-op's due diligence on Graig Fatha and will be responsible for its progress through construction and operations.



## **Will Dodd**

Is the chief financial officer for Ripple, ensuring the co-op's accounts are in good order and statutory reporting carried out properly.



“

**Helping** households  
combat climate change  
through clean energy  
ownership

Part-owning a wind farm  
with Ripple is up to 65%  
cheaper than installing  
solar panels on your roof!

# 13. Financial Information

## Third Party Information

General information sourced from third parties in this offer document has been accurately reproduced as far as the Directors are aware and are able to ascertain from information published by that third party. No facts have been omitted which would render any such reproduced information inaccurate or misleading.

## Capital Costs of the Project

The total share capital of £4,120,000 will pay for the: purchase of the project rights; turbine and installation; tracks, drainage works and crane hardstandings; electrical works; grid connection; land rights, taxes; repayment of project setup costs; and construction and operational contingency sums.

An arrangement fee of 5% will be paid to Ripple Energy.

## Indicative Revenues

The co-op's revenue will be set annually to cover its operating costs, expected to equate to a rate of about £20.00 per MWh. The remaining value of the generation will be paid to the co-op members as savings on their electricity bills according to the number of shares they own.

## Indicative Savings

The savings will be determined by:

**a) Wholesale electricity price:** this will determine the value of the project's generated power and will be reflected in the power purchase agreements between the supply partners and the project. Wholesale prices are variable and uncertain: the forecasts presented

in this document are based on the UK Government's projections as set out in the Updated Energy and Emissions Projections: 2018<sup>8</sup>. High, Central and Low scenarios are presented and used in this document. Current wholesale prices are lower than the government's forecasts. This is partly a combination of low oil prices driving gas prices lower as a result of corona virus, combined with lower demand.

**b) Embedded Benefits and REGOs:** the GB electricity market makes payments known as 'embedded benefits' to generators that are connected to the distribution system to take account of the fact the power is likely to travel a shorter distance to its point of consumption. The value of those embedded benefits is subject to change and only the value of BSUoS, AAHDC, Transmission Losses and Distribution Losses have been included in the modelling.

REGOs are allocated to renewable energy generators per MWh generated. Those REGOs are used by suppliers to prove the purchase of a corresponding volume of renewable electricity. REGOs have a market value but are not subsidies.

**c) Energy Yields:** the amount of electricity generated by a wind turbine is dependent on the wind, which is variable.

The yield prediction has been estimated using virtual met mast data from the Met Office and considering local features including the neighbouring wind farm.

There have been no direct wind measurements at the project site, which introduces uncertainty into the forecast and has led to the selection of the P75 for the base case figures. Residual uncertainty remains, and there is a 25% probability that the average output will be below the selected P75 case. There is a 10% probability that the average output will be below the P90 levels.

The estimated yields are:

**P50:** 7,370 MWh

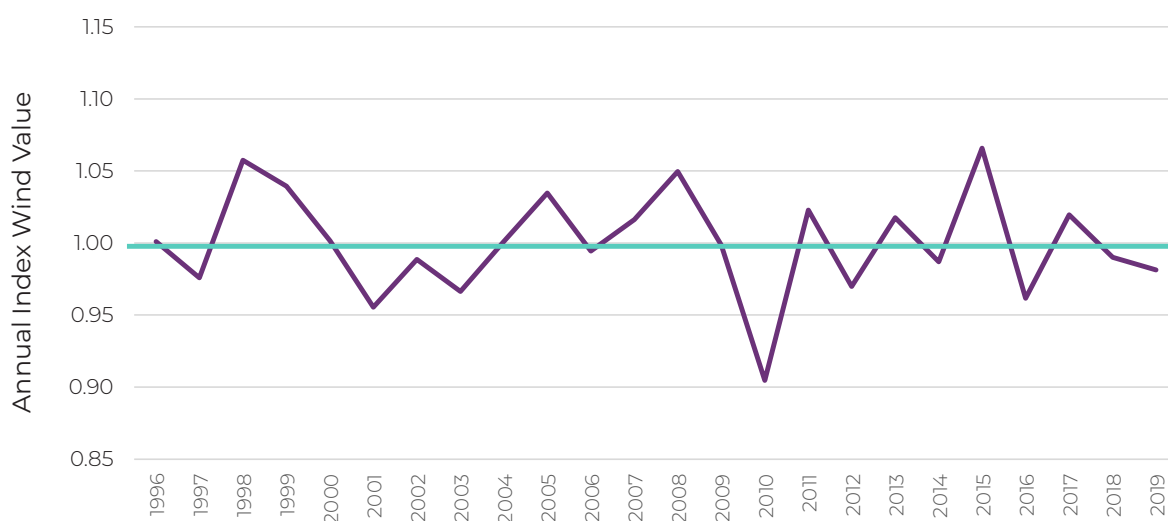
**P75:** 6,681 MWh

**P90:** 6,063 MWh

The above yield estimates include a 2% reduction applied by Ripple as a

conservative measure to account for potential blockage and induction zone effects that may be included as standard in energy yield assessments since the original assessment was carried out.

Energy output will also vary from year to year and from month to month, based on seasonal variation in the wind climate and outages such as maintenance. Annual variation of +/- 10% is relatively common and may be greater in some years (e.g. in 2010 wind speeds were approximately 10% lower than long term averages, which is equivalent to a 20% reduction in energy). The following graph illustrates past annual variability in yields:



**d) Operating costs:** as set out below. The internal rates of return are set out for different scenarios in **Section 11**. These assume a 0% cost of capital and are shown in real terms.

It is the intention that each year, 5% of the members' shares will be withdrawn automatically and capital repaid as part of the savings. This will be shown in the

members' dashboard. Prior to Year 20 the shares will be adjusted for the remaining life of the project so there are sufficient shares left.

The following tables indicate the potential savings for members buying different numbers of watts (shares equivalent), all based on P75 and UK Gov Central electricity price forecast scenario and costs include the arrangement fee.



**Member owns 2,245 watts to generate 6,000 kWh, costing £3,885**

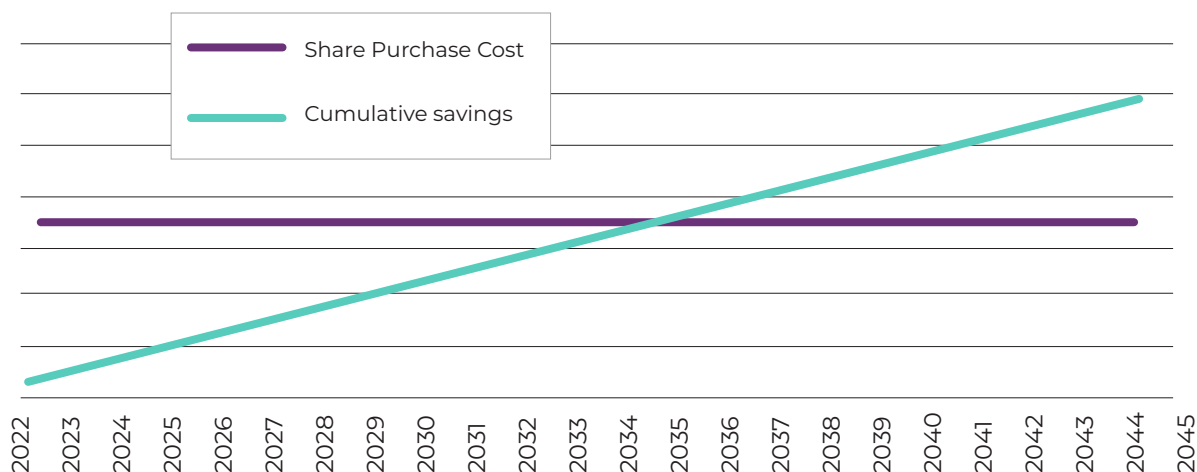
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6-10	Yr 11-20	Yr 20-25
Capital Repayment (£)	185	185	185	185	185	925	1,850	
Saving (£)	175	220	264	279	287	1,449	2,894	1,354
Total (£)	360	405	449	464	472	2,374	4,744	1,354
Cumulative (£)	360	766	1,215	1,679	2,151	4,526	9,269	10,623

**Member owns 1,272 watts to generate 3,400 kWh, costing £2,202**

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6-10	Yr 11-20	Yr 20-25
Capital Repayment (£)	105	105	105	105	105	524	1,048	
Saving (£)	99	125	150	158	163	821	1,640	767
Total (£)	204	230	255	263	268	1,345	2,688	767
Cumulative (£)	204	434	689	951	1,219	2,564	5,253	6,020

**Member owns 561 watts to generate 1,500 kWh, costing £971**

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6-10	Yr 11-20	Yr 20-25
Capital Repayment (£)	46	46	46	46	46	231	463	
Saving (£)	44	55	66	70	72	362	723	338
Total (£)	90	101	112	116	118	594	1,186	338
Cumulative (£)	90	191	304	420	538	1,131	2,317	2,656



## Indicative Operating Costs

The total operating costs of the project are estimated at about £135,000 per annum. This allows for the: operation and maintenance of the turbine; insurance, land rent, business rates, community benefits, maintenance of civil and electrical works, and Ripple's costs for managing the society and project. This works out at approximately £20.00 per MWh of generation.

## Operational cash flow reserve

The co-op will aim to maintain a cash flow reserve. Its revenues are dependent on the level of generation. The aim of the cash reserve is to enable costs to be paid in a low wind year. The operating costs will be adjusted each year to maintain a stable reserve entering the next year. If it is a very high wind year it would be expected that the reserve would increase above the required level. The operating cost the following year could be reduced, thereby reducing the reserve to the required level. In a low wind year the following year's operating cost would be increased to build the reserve back up.

## Borrowing

An underwriting facility may be secured to allow the co-op to borrow up to 28% of the capital cost as bridge finance. The purpose of this bridge finance is to allow the offer to close even if the amount raised is close to but not yet at the target amount by the point that the Directors decide to close the offer. In the event the bridge finance cannot be repaid within about 12 months, the co-op will seek longer-term debt which will be repaid from the project revenue. The cost of bridge finance and/or long-term debt is likely to reduce members' savings during their repayment periods.



# 14. Risk Factors

**All investment and commercial activities carry risk, and investors should take appropriate advice and make their own risk assessment whilst bearing in mind the social and environmental objectives of this investment opportunity.**

**If you are in any doubt about the contents of this document or the action you should take, you are strongly recommended to consult a professional adviser authorised by the Financial Conduct Authority to advise on investment in unlisted debt, shares and other securities.**

The Directors believe the following risks to be the most significant for potential shareholders. However, the following risks do not necessarily comprise all those associated with an investment in the shares and are not presented in any assumed order or priority.

## General investment risks

- a. Capital Risk:** Investment in smaller, new and unquoted businesses is likely to involve a higher degree of risk than investment in larger, established companies and those traded on a stock exchange. Investing in shares is not the same as investing money in a bank account as your capital is at risk and you could lose up to, but no more than, your entire investment.
- b. Savings:** an investment in shares of this type is speculative and involves a degree of risk. CO-Pilot's ability to deliver savings to members is dependent on the continued success of its business model.
- c. Unsecured:** the shares are an unsecured investment and in the event of the co-op's insolvency will rank behind all

other creditors. It is not anticipated that there will be any secured or preferential creditors unless a lending facility is used in the event the £4.35m requirement is not met by share sales. In the event of CO-Pilot's financial failure, you may not be repaid in full or at all should the proceeds from a sale of CO-Pilot's assets fail to cover its other liabilities.

- d. Liquidity:** the shares are non-transferable will not be traded on a recognised exchange.
- e. Share withdrawal:** Shares can be withdrawn by members terminating their Customer Agreement by giving notice to Ripple (subject to the 2 year minimum term of the Customer Agreement), or as otherwise described in the Customer Agreement and subject to the discretion of the directors. If no one wishes to buy a corresponding number of shares, or the co-op lacks sufficient cash, the value of the shares you wish to withdraw may not be paid until such time as the board decides it is reasonable to do so. **No shares may be withdrawn within 24 months of issue**, except for those automatically withdrawn as part of savings on members' electricity bills.
- f. Long-term commitment:** Applicants should note that it may not be possible to recoup the value of shares and so should regard shares as a long-term commitment which may span the operational life of the Project (20 years).
- g. The Shares are not covered by the Financial Services Compensation Scheme (FSCS)** – this means there is no right to compensation from FSCS.



**h. Past performance is not necessarily a guide to future performance:**

Events in the past, or experience derived from these, or indeed present facts, beliefs or circumstances, or assumptions derived from any of these, do not predetermine the future.

**i. Financial and performance projections:**

Hopes, aims, anticipations, targets, projections (including the financial projections in this offer), plans or intentions contained in this document are no more than that and should not be construed as forecasts.

**j. Tax:** the trading benefit portion of savings on your electricity bills will be taxable should your allowances for that tax year be exceeded. The co-operative society may inform HMRC of the total savings you have received in any one tax year.

## Risks Associated with the Project

**k. Mechanical failure:** the project will be insured for damage, breakdown and loss of income in line with standard industry practice. Breakdowns and parts failures will be covered by the turbine manufacturer's service agreement. However, there may be interruptions to the generation of electricity from the turbine, caused by damage to or mechanic/electrical failure of equipment or other factors, affecting the amount of savings due to members.

**l. Turbine performance:** the co-op's assumptions around energy generation levels each year are based on calculations using methodologies commonly used by the industry for individual turbine installations where no wind measurements have been made on site. However, long-term changes to or inherent variability in weather patterns and/or equipment underperformance may result in lower levels of electricity generation and therefore income.

**m. Electricity prices:** The savings that may be achieved from ownership of the project are highly dependent on the wholesale electricity price. If the wholesale price of electricity falls then your bills will go down, but the amount of savings will also fall. If the value of the power generated is less than the operating cost of the project, then appropriate action will be taken by the board. Such as seeking to reduce the operating costs, or seeking additional investment from the members to meet the necessary shortfall. Additional investment is not mandatory, but those who do not participate will see an adjustment in the percentage of shares they own in the co-op.

**n. Project Finance:** If debt is used to help finance the project, members' savings may be reduced significantly until such time that debt is paid off in full.

**o. Range of Suppliers:** the initial power purchase agreement with Octopus Energy is for one year and is for the entirety of the project's generated power. This means that members will be unable to be supplied by anyone other than Co-op Energy or Octopus Energy (or M&S Energy, London Power or Affect Energy if already their customers) without terminating their membership of the co-op. While it is intended that additional suppliers will be available to the members after the first year of generation, it is not guaranteed.

**p. Coronavirus:** although not expected, there is a risk that social distancing or other measures relating to coronavirus could delay the programme

**q. Property Access Rights:** documents granting access rights from the council and Welsh government are still being negotiated but will be exchanged prior to the completion of the project purchase from Clean Earth.

# Appendix 1 -

## Key Facts & Glossary

**Applicant** An applicant for shares

**Application** The application process for shares in the co-op is online at [www.rippleenergy.com](http://www.rippleenergy.com).

**Directors** The directors of the Co-Pilot Wind Project Ltd co-operative society.

**Eligibility:** to be eligible for shares in the society, the member must be a named GB domestic electricity bill payer. We cannot accept members who are on pre-payment meters at this time. Note that only one person per address can become a member of the society.

**Graig Fatha:** is the location of the proposed wind turbine, being Graig Fatha, Coedely, Tonyrefail, CF38 8EX, Wales.

**Interest/Trading benefit:** as the project will be generating electricity for members' use via the grid, there won't be interest on investment in the typical sense. Members will receive their share of the project's generated value as savings on their electricity bills. Ripple will produce an annual statement for members to show the split between return of capital and trading benefit (considered as interest for tax purposes).

**kWh** Killowatt hour – a volume of power generated. 1kWh is 1/1000th of 1MWh.

**Minimum investment per applicant:** £250

**Maximum investment per applicant:** members will be limited to a maximum number of shares that entitle the member to generation of the project that is equivalent to about 120% of the member's electricity demand. Members wishing to own more than 518,000 shares costing £5,180 (plus 5% arrangement fee), equivalent to 120% of an electricity demand of 7,000 kWh per annum,

will be requested to provide evidence to Ripple in the form of an electricity bill or other agreed document. Members can invest a maximum of £100,000 in the co-op.

**MW** Megawatt, equalling 1 million watts of power.

**MWh** Megawatt hour – a volume of power generated. 1MWh would be generated in one hour by 1MW operating at full capacity.

**Offer** The offer of shares in Co-Pilot Wind Project Ltd contained in this offer document.

**Offer Period** The period during which the offer will remain open (including any extension) as set out in the offer timetable in **Section 10**.

**P50, P75, P90.** As the energy production of a wind turbine is variable according to the weather, the energy yield estimates are given as probabilities. P50 is the estimate for which there is a 50% probability that the turbine will generate more electricity than the P50 estimate on average. The P75 value has a 75% probability of being exceeded, and the P90 a 90% probability. The P values for Graig Fatha are **P50:** 7,370 MWh; **P75:** 6,681 MWh; **P90:** 6,063 MWh

**Projections** The financial projections for Co-Pilot Wind Project Ltd set out in **Section 13**.

**Purpose:** the money raised from selling shares in the society will be used to buy the project rights for the Graig Fatha turbine and pay for its construction. Shareholders will then have proportionate volumes of the turbine's electricity allocated to them and they will receive savings on their electricity bills due to the electricity their turbine has generated.

**Residual value of shares:** the amount you will be repaid when requesting to withdraw all of your shares. The residual value of members' shares when they withdraw will be less than what they paid, to account for the capital sums already repaid during their time as a shareholder.

**Target:** the target amount to be raised by the offer, being 4,326,000. The target is also the maximum amount that the offer can raise. If the offer does not raise the target within 6 weeks of opening, the Directors may decide to extend the offer period for up to a further 6 weeks. If the target amount has not been raised by the end of that period, the Directors will assess whether another finance option, such as the underwriting facility described in this offer document, should be used to reach the target. If it cannot, the offer will end and the co-op will return all application funds.

**Terms and Conditions** The terms and conditions of the offer contained in and constituted by this offer document, the Customer Agreement and Co-Pilot's Rules.

**Shares:** the shares issued by Co-Pilot Wind Project Ltd ("Co-Pilot").

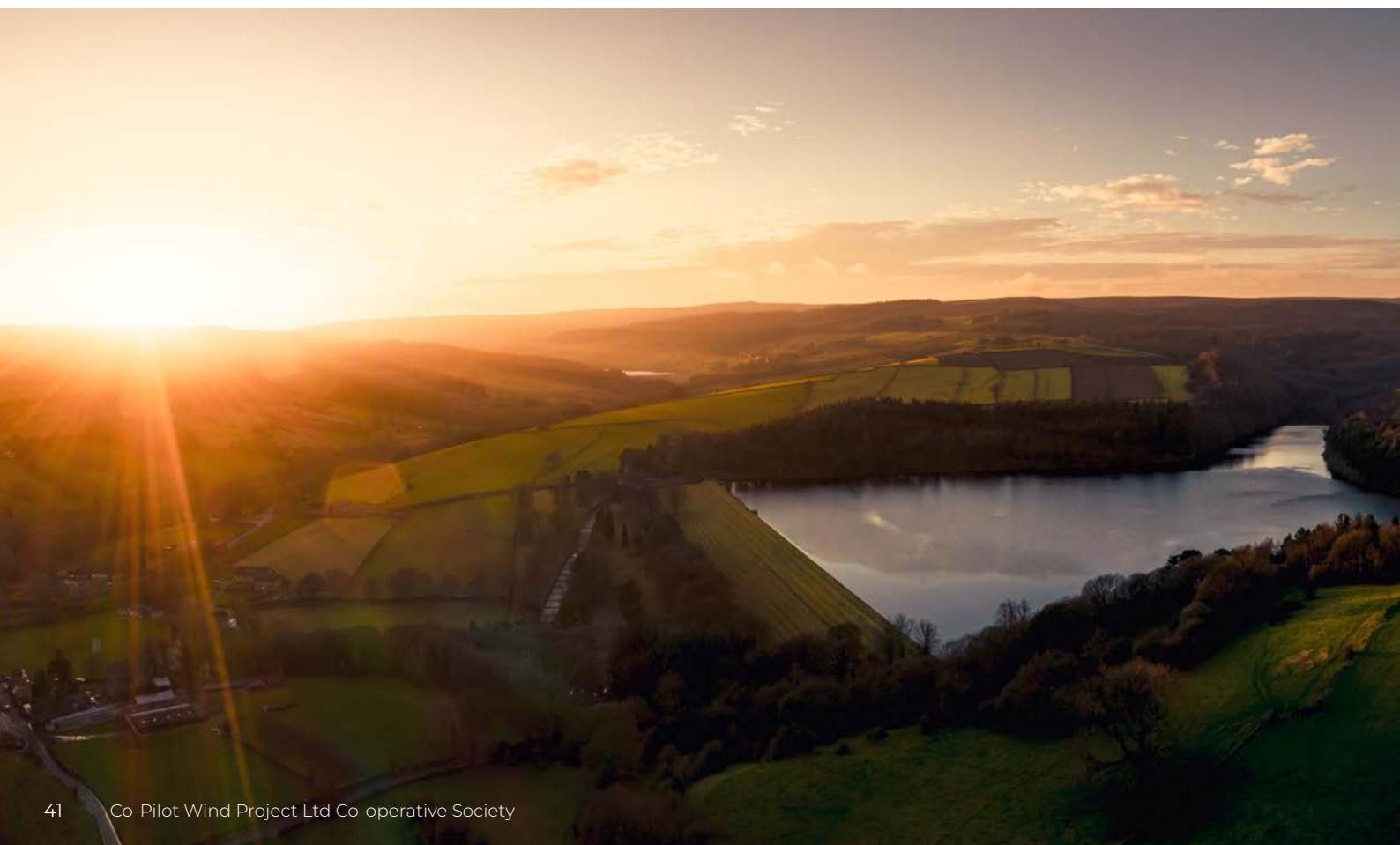
**Share Value:** Nominal value of £0.01 per share

**Withdrawable:** The term used to describe how shares are "withdrawn" by a member, as a means of getting back their share capital. Shares can be withdrawn no earlier than 24 months after issue, subject to the board's discretion and the co-op's rules.

**Voting rights:** one vote per member, regardless of the number of shares they own

**Timetable:** as set out on [page 27](#).

**How to apply:** the application process is online only and available at [www.rippleenergy.com](http://www.rippleenergy.com).





# Appendix 2 - General Information on Co-Pilot Wind Project Ltd

## Structure

Co-Pilot Wind Project Ltd was formed and registered with the Financial Conduct Authority as a Community Benefit Society (number 4640) on 9 October 2019 with registered office at c/o Ripple Energy Limited, 1st Floor, Creative Works, 7 Blackhorse Lane, London, E17 6DS.

A Community Benefit Society is a legal form which conducts business for the benefit of the community. It has shares that can be purchased by the public, who by purchasing shares become members of the Society.

The Directors of the Society are appointed by the members at the annual general meeting, subject to the Rules of the Society. Administration and management of the Society is the responsibility of its Directors. Only Members have the right to vote at members' meetings and appoint the Directors.

## Management

Co-Pilot Wind Project Ltd will have no employees and the business is not dependent on key individual employees. Day to day operations will be managed by Ripple Energy under the supervision of the Board. The Board bear ultimate responsibility to the Members for the management and administration of the Society, acting on reports and advice from Ripple Energy and from third-party contractors.

## Disclosure Statement

The Directors of Co-Pilot Wind Project Ltd have not, for at least the past five years,

received any convictions (for any fraudulent offence or otherwise), or been involved in any bankruptcies, receiverships or liquidations, or received any public reprimand or sanction by a statutory or regulatory authority or designated professional body, or been disqualified from any function by any court.

## Conflicts of Interests Statement

None of the Directors are connected to employees or directors of Ripple Energy

The Directors are not aware of any other actual or potential conflicts of interest.

## Remuneration Statement

Each Director is entitled to be paid £500 per annum (RPI linked) to cover reasonable expenses incurred in the service of acting as a Director.

The Directors are acting as Directors because they are committed to the success of the Co-Pilot's business, its ability to directly benefit the surrounding community and to make a difference by their own actions to the environment.

Directors do not benefit from pension schemes or share option schemes and, except for the reimbursement of properly incurred expenses, and the remuneration above, there are no benefits for Directors.

Directors serve in accordance with the Rules of Co-Pilot Wind Project Ltd. There are no service contracts for the Directors.

It is intended that some or all of the Directors will apply for Shares.

## Major Shareholders

There are currently no major shareholders in Co-Pilot and in the context of a co-operative society such a concept is of limited significance. There is a principle of one vote per member whatever a Member's holding. Members cannot invest more than £100,000 in the co-op. No individual, organisation or groups of individuals or organisations has control, given the one Member, one vote governing principle

---



## Appendix 3 - Information on Tax

Savings due to members will be subject to United Kingdom tax, but the repayment of share capital (intended to be 5% per annum) will not be taxable. Ripple will provide members with tax statements setting out the amount received by members as share withdrawal value (non-taxable), and the remaining savings (taxable trading benefit).

Current legislation provides basic rate taxpayers £1,000 and higher rate taxpayers

£500 personal savings allowance which may be available to members to reduce any potential tax liability. Since savings will be paid gross, it will be the individual responsibility of members to declare this income as interest on their tax returns if they are required to do so. Applicants should consider obtaining professional tax advice if they are unsure of their position.







**Join us and create  
a cleaner, brighter  
future. Together.**

  
**Graig Fatha**  
wind farm