



PUBLIC SECTOR

# Wind Farm Development

**CASE STUDY**  
**ROCHDALE**  
**BOROUGH COUNCIL**

Public-sector wind of change  
- local wind is an invaluable  
community resource



Renewable wind energy, captured by public-sector wind farms, is helping forward-thinking local authorities to generate new multi-million-pound revenue streams, fund municipal services, put land assets to work, underwrite energy security and offset soaring energy prices.

There are also national and global gains; municipally-owned wind farms can potentially contribute significantly towards ambitious UK climate change goals, helping councils to meet their binding renewable power and carbon reduction obligations.

The public are supportive too as demonstrated in recent Comres and Opinion polls, which confirm that two-thirds of people (67% and 68% respectively) support more wind farm development in their area.

Encouraging financial figures certainly help. Each medium-sized 0.5 MW turbine can produce returns of up to £9 million over a 25 year life time. Even a small 10MW – 4 turbine wind farm will generate income equivalent to a 3.5% council tax cut for 25 years. These are strong incentives.

However, the question for many authorities is how to bring all these many benefits to fruition.

Rochdale Borough Council is taking an innovative approach that promises a high rate of success. It is working with the private sector in a new form of public-private sector partnership designed to complement the Borough's existing privately-held wind infrastructure.

The Council believes that the joint initiative will help to achieve its twin goals of becoming both energy self-sufficient and the UK's greenest borough.

**PROGRESSIVE PARTNERSHIP IDENTIFIES NEW OPPORTUNITIES**

Leader of the Council, Councillor Colin Lambert, has a vision for Rochdale that it becomes the greenest borough in the country. He sees the strategy as setting ground-breaking precedents and said: "We face some serious challenges including global warming, climate change, energy and resource depletion. These require us to develop some imaginative solutions. In tough economic times, local authorities have a responsibility to ensure that private and public sector joint enterprises, such as this, offer value for money."

"There are a number of opportunities for wind energy projects that we can own and operate on behalf of our community. Our objective is for individual citizens to become personal shareholders in renewable energy."

If approved, the proposal will have four stages. The first of which is to develop a small pilot wind turbine. Following phases will include developing a combination of medium-sized and small turbines.



**NEW MUNICIPAL ROLE AS DEVELOPER, OWNER AND OPERATOR**

This has fundamental implications for the Council. Until now, planning authority options have been limited. Partnerships with private-sector wind farm developers have tended to focus on specific proposals. The public sector has not been able to drive wider events.

ASC Renewables' approach has changed all that. It completed a comprehensive wind feasibility audit over Rochdale's Borough at nominal cost, which identified and prioritised the total wind energy potential. As a result, Rochdale Borough Council finds itself in a powerful new decision-making position.

As a specialist renewable energy company they have provided the Council with the technical and business expertise needed to assess their wind energy potential and enable the Council to become a proficient long-term wind energy developer, owner and operator.

This will create new, low-risk, high-return ethical investment opportunities for both the Council and individual citizens in a sustainable local industry for the twenty-first century.

*"We are now taking a leading role in renewable wind energy development, which I hope will be seen as an example of what can be achieved by local authorities,"* Councillor Lambert added.

**ACTING SWIFTLY BEFORE THE LOCATIONS ARE GONE**

*"There is a practical limit to the number of turbines the landscape can accommodate, which is why authorities often have to move quickly,"* explains ASC Renewables' Commercial Director, Tom Griffin.

*"Prime sites across the UK are usually developed by private companies through the planning system. This leaves the public-sector with restricted scope for involvement. Our philosophy is to change that by helping authorities to develop and operate the best remaining opportunities themselves as a truly sustainable form of public investment."*

*"We believe in long-term partnerships. Our phased approach keeps costs very low at the outset during feasibility work, leading to detailed studies and pilot projects. ASC Renewables' aim is to be good partners for the whole 25-year life of a wind farm."*

And added: *"ASC Renewables' specialist team undertake initial feasibility assessments, proposals, turbine specifications, procurement, installation, maintenance, additional external funding where necessary, commercial matters, liability insurance, due diligence and legal arrangements."*

**MANY HAPPY FINANCIAL RETURNS – THE FIGURES ADD UP**

The basic financial model makes the prospect of turbines very appealing to local authorities – and local people. In addition to an income from electricity sales to the national grid, wind projects under 5 MW benefit from the Government's Feed-in-Tariff subsidy guaranteed for 20 years.

Depending on local circumstances and conditions, small 11kW turbines typically costing less than £70,000 to buy and install, are capable of powering 7 homes and typically provide a 7% return on investment.

Medium-sized 500kW turbines have higher rates of return. For a capital outlay of £1.64 million, they can generate between £7.0 and £9.0 million return depending on location. Large turbines can be more profitable still. A small, 5 turbine wind farm consisting of 2 MW to 3 MW turbines can generate a total return of £110.0 million from an initial investment of £17.9 million.

Rochdale envisages an annual financial return on community wind investments of between 8.6% and 16.9% depending on the final size of the project. It will only act on a proven business case.

**ADDITIONAL BENEFITS**

There are additional benefits. Small turbines standing 25 metres to the tip typically save 14 tonnes of carbon annually. Medium-sized turbines with a tip height of 75 metres can save some 630 tonnes annually; large turbines standing 100 to 125 metres above the ground at the tip can save circa 2,500 and 3,800 tonnes respectively.

Other drivers are equally pressing. UK electricity prices have risen more than 9.1% on average during the past ten years. The Department of Energy and Climate Change's (DECC) most likely prediction is for prices to rise by a further 58% in the next decade. This makes local renewable energy very attractive.

In addition, the Government's renewable energy target has been for the UK to generate 10% of its electricity from renewable sources by 2010, rising to a legally-binding 15% by 2020 under the EU Renewable Energy Directive.

**PRACTICAL RESPONSIBILITIES TO MANCHESTER, THE UK AND THE WORLD**

Rochdale Borough Council has other responsibilities. As a partner to the Greater Manchester Climate Change Strategy, it has agreed to 48 per cent CO<sub>2</sub> emissions cuts by 2020. The Rochdale Green Action Plan is the council's overarching sustainability strategy.

This also supports the Greater Manchester Low Carbon Hub scheme to cut CO<sub>2</sub> emissions as part of its City Deal with the Government.

The council uses 27.5GWh of electricity itself each year to power buildings and offices. The 2012-2013 cost was £2.8 million, excluding street lighting and leisure sites. Its annual Carbon Reduction Commitment (CRC) tax bill in 2012 was £339,000.

Bold promises call for bold actions. Municipal wind power makes financial and environmental sense.

**LONG TERM VISION**

Rochdale Borough Council's long-term vision is to establish a Rochdale Energy Service Company that will sell electricity to the national grid, or directly to local residents and businesses at a significantly discounted rate.

During times of possible power blackouts - or 'brownouts' where industry suffers from polluting UK fossil-fuel power stations are closed, local wind energy would provide an essential power back up for the local community.

**ROCHDALE'S ACTION PLAN FOR A WINDY FUTURE**

The programme the Council is developing would include the procurement of three medium-sized and up to nine small turbines that will form the Rochdale Council Energy programme within the authority's Capital Programme.

The Council is also keen to support community ownership of renewable energy projects. To do this, it is in discussions with a recently formed Community Energy Group for the Borough. They are investigating the potential for joint development of a small turbine site between the Council and community. Survey results show there is no opportunity for large turbines on the Council's land holdings.

As the 'wind capital of Greater Manchester', Rochdale is already home to an operational wind farm on Scout Moor, with an approved second site at Crook Hill. It is also interested in developing a number of smaller scale opportunities around the borough.

However, mindful that wind turbines can be controversial, it does not want to allow private landowners and developers to take all the remaining capacity for wind development. In particular it is aware of increasing arguments about the cumulative visual impact of too many turbines too close together.

Rochdale Borough Council's positive experience could help other authorities to maximise their remaining prime wind farm opportunities. However, early action may be important.

**ASC Renewables**