

## Renewable Energy: Seminars for Lancashire Planners

### Contents

This learning document details the elements of the Renewable Energy Seminars for Lancashire Planners. It outlines what was done, who it was aimed at, what worked best and feedback and discussions.

### Seminar objectives & organisation

Three seminars were held for planners in Lancashire between March and June 2011. These complemented the regional technical support programme of the CLASP Climate Change Skills Fund which covered renewable energy as well as other aspects of planning for climate change mitigation and adaptation <http://www.climatechangenorthwest.co.uk/technical-support-amp-training.html>

The Lancashire seminars took place at the same time as the publication of Renewable Energy Capacity Studies for Lancashire, which outline the technical renewable energy capacity for each local area. The seminars supported planners in understanding the implications of these reports.

The aim of the seminars was to provide planning officers with knowledge to help them in policy development and in processing planning applications for renewable energy with the intention of more renewable energy schemes receiving planning permission in Lancashire. Both policy and development management planners attended the sessions.

The seminars were discussed at two Lancashire-wide planners meetings to get some initial views, and then advertised across planning contacts.

The seminars lasted 2½ hours. Notes were taken and these and the presentations can be found for each session on the CLASP website [www.climatechangenorthwest.co.uk/web-portal.html](http://www.climatechangenorthwest.co.uk/web-portal.html)

Each session was tailored to be relevant and applicable to the local area, covering the technologies those planning officers were most likely to encounter. The tone of the sessions was to talk about real installations, not just theory, to make renewables very applicable to the work of the planners attending.

### Seminar Content

The agenda was split into two parts, with questions and discussion during each part:

#### Technology Overview

- Summary of renewable energy technologies, outputs, financial viability
- Key characteristics of the technologies that influence suitability to location

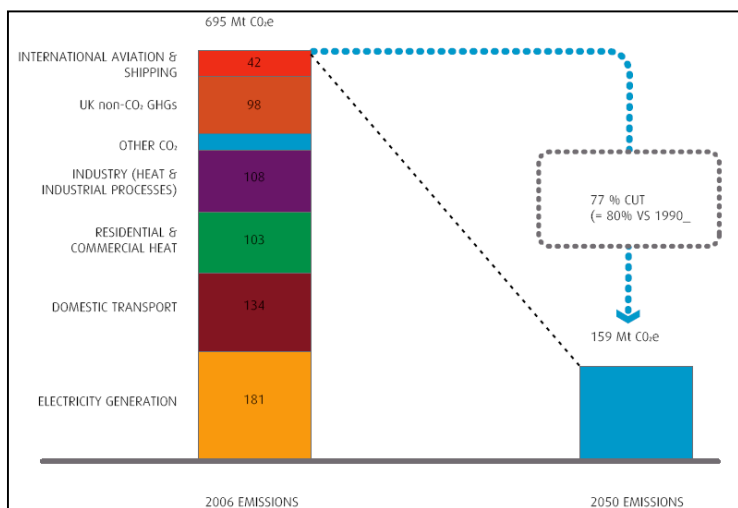
#### Policy Overview

- What is working now – renewables applications in Lancashire
- Developer & installer feedback on policy and practice
- What policies are other LAs using to deliver renewables in their area?

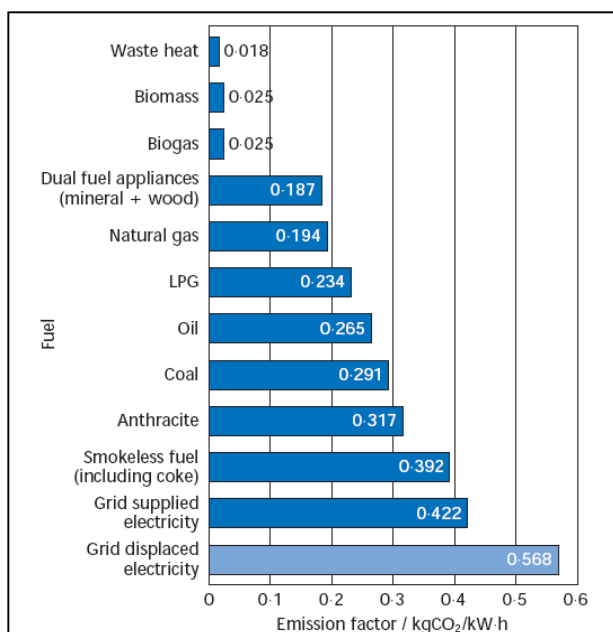


## Technology Overview

To introduce the seminar basic key information was provided on the UK greenhouse gas emissions profile, to demonstrate how a large part of our emissions can be influenced through the planning system. This shows planners how important their role is.

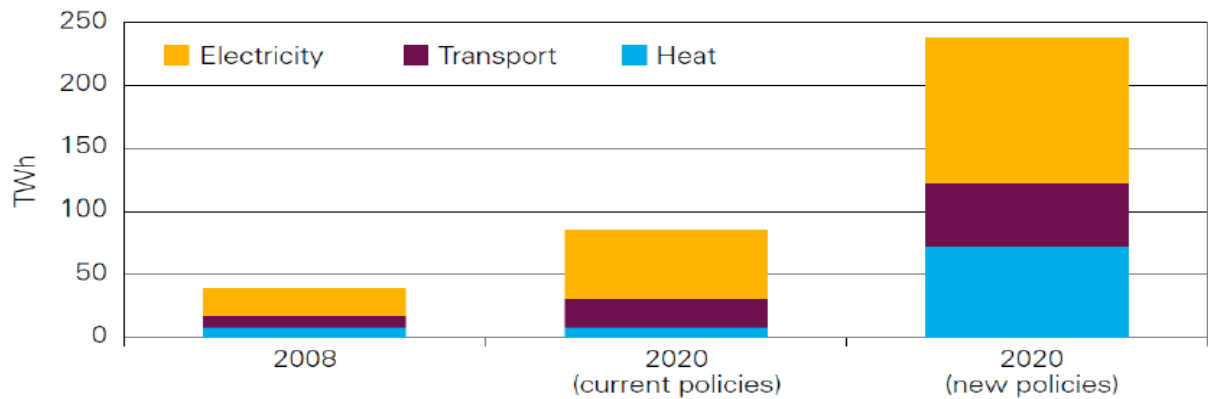


We also explained the carbon burden of different fuels, demonstrating how some are very low carbon (biofuels, waste heat) some lower carbon than others (natural gas) and some very high carbon (grid electricity). It is important that planners understand this to make sure that policies promoting renewable energy also achieve a carbon reduction, and that switching to a lower-carbon fuel can achieve savings even if this is not a completely renewable energy source.



Government targets for renewable energy were explained to show the scale of what needs to be installed. We also explained that the targets for each energy type are linked, as for example, a move to electric vehicles, or heat pumps, will increase our use of electricity, and therefore increase the amount we need to generate from renewable sources. Planners need to be aware of the implications of these targets for their local area.

## What are we seeking to achieve? 15% - 7x increase in renewables by 2020



Source: Energy Trends June 2009 and DECC internal analysis

Having provided this background, we got to the local implications. To do this, we assumed that, although the renewable energy targets are unlikely to be split equally across each area of the UK, Lancashire would meet its share of the renewable energy target contributing 15% of energy demand by 2020.

We outlined an assessment of Lancashire's current renewable and low carbon energy generation (based on local knowledge rather than exhaustive research) and then compared that to the targets, to see how much more is needed.

The Renewable Energy Capacity Study showed that across Lancashire we could theoretically produce 10 x the renewable electricity target and 5 x the heat target. Then we explained what that maximum capacity for renewable electricity would look like in each district attending the session - here's a few examples of the number of installations:

| Theoretical Maximum Renewable Electricity Capacity of example local areas |                 |               |                |              |                 |                  |                |
|---|-----------------|---------------|----------------|--------------|-----------------|------------------|----------------|
|   | Commercial Wind | Small wind    | Hydro          | Biomass/ EfW | Solar PV        |                  |                |
|   | 2.5MW turbines  | 11kW turbines | 50 kW turbines | 10MW plant   | Domestic 2.5 kW | Commercial 50 kW | 1MW solar farm |
| Chorley   | 302             | 3,000         | 20             | 2            | 9,400           | 282              | 9              |
| Pendle  | 178             | 364           | 20             | 1            | 7,200           | 216              | 7              |
| Wyre  | 331             | 2636          | 20             | 2            | 10,200          | 306              | 10             |

This showed the planners attending just how many installations their local area could provide in theory. This can give everyone quite a shock!



Having set the scene for what the targets could really mean and what the capacity is, we gave a brief overview of each technology looking at the outputs, financial viability, and key characteristics of the technologies that influence suitability to location including constraints and planning considerations. In this we covered:

- Wind farms
- Single large turbines
- Small wind
- Hydro
- Solar farms
- Commercial/Domestic Photovoltaics
- Energy from Waste and Biomass
- Biomass for heat
- Heat pumps
- Solar hot water
- District heating

We also looked then at viability, cost and who pays. This determines what type of technologies will come forward as much as the technical characteristics.

We drew it all back together again and compared the relative outputs of individual technologies. This really helps to show the scale of what needs to be done to achieve the target and what the planners will have to handle in terms of policy and development management.

| <b>Scale of Different Renewable Electricity Technologies</b> |                    |                      |                                 |
|--|--------------------|----------------------|---------------------------------|
|  | Capacity (each) kW | Output (each) MWh/yr | Number Equivalent to Scout Moor |
| Scout Moor Wind Farm   | 65000              | 154000               | 1                               |
| Caton Moor Wind Farm   | 16000              | 36442                | 4                               |
| Jameson Rd Landfill Gas (Wyre)                               | 3800               | 20140                | 8                               |
| Dewlay Turbine (Garstang)                                    | 2000               | 5200                 | 30                              |
| 2 Hectare Solar farm   | 1000               | 1000                 | 154                             |
| Small Hydro  | 100                | 526                  | 293                             |
| Micro-Hydro  | 20                 | 100                  | 1,540                           |
| Small wind turbine   | 11                 | 30                   | 5,133                           |
| Commercial Solar PV  | 20                 | 25                   | 6,160                           |
| Domestic Solar PV  | 2                  | 2.5                  | 61,600                          |

Then having understood that one wind farm of 26 turbines is equivalent to over 60,000 domestic solar PV installations, we looked again at how each local area could meet the renewable electricity target. The figures given are just suggestions, as the target can be met in different ways, but the numbers of large technologies are quite critical – reducing these would mean a significant increase in the number of the smaller technologies.



The table below shows examples of how local areas could meet their renewable electricity targets – it simply shows that it is possible, but emphasises the different outputs and numbers of installations to aim for and for planners to handle.

| Examples of how Renewable Electricity Targets could be met |                 |               |                |              |                 |                  |                |
|--|-----------------|---------------|----------------|--------------|-----------------|------------------|----------------|
|  | Commercial Wind | Small wind    | Hydro          | Biomass/ EfW | Solar PV        |                  |                |
|  | 2.5MW turbines  | 11kW turbines | 50 kW turbines | 10MW plant   | Domestic 2.5 kW | Commercial 50 kW | 1MW solar farm |
| Chorley  | 6               | 100           | 1              | -            | 1,000           | 100              | -              |
| Pendle   | 10              | 20            | 1              | -            | 720             | 20               | -              |
| Wyre   | 16              | 100           | 5              | 2            | 5,000           | 100              | 1              |

This information then shows what the more realistic picture is for those shocked by the capacity table. For example, Chorley could aim for six 2.5MW turbines, rather than then 302 indicated in the capacity figures. This tends to calm everyone down a bit and help them look at how to balance out what’s needed, and begin to think about how these might be delivered and where they might go. These figures are only estimates for electricity – participants need to think about the heat targets too.

## Policy Overview

Then we moved onto how to make all this happen. The Policy Overview section touched on national policies, PPS1 and PPS22, and the Regional Spatial Strategy (which has a strong evidence base that can still be used). The Envirolink Survey into Renewable Energy Planning 2004 – 09 showed while 75% of applications were for small wind, 77% of the consented energy output was actually from Energy from Waste. The small wind consented output was less than 1% of the total. We looked at what was consented/refused in each planning authority attending; this shows the system works, but the volume is not coming through yet to reach our targets.

We briefly reviewed what each planning authority policy currently states about renewables, energy or carbon reduction. This is tricky as so many are working on Core Strategies and changing policies at the moment, but it’s also timely as policies are in development.

In preparing the sessions we spoke to some developers and installers of renewable technologies to see if there were authorities they found particularly easy to work with. The ones dealing with lots of applications of course get better at handling them. We outlined what developers found to be a barrier and a help.

Things that help included:

- Screening opinion
- Robust evidence base to support policy
- If areas for renewable development are identified, make clear that other areas can still be considered, and it is up to the developer to prove acceptability through EIA
- Balancing the impacts of renewable energy generation against impacts on the environment

Things that hinder included:

- Vague statements in Core Strategies
- Lack of robust evidence
- Arbitrary stand off distance from residences (for wind development), use residential amenity, not a distance, as some houses nearby are less affected than others further away
- General statements such as 'adverse effect' or 'significant impact' as reasons for refusal, very vague and give no concrete information about how the balance of development vs refusal is made, take no account of the social, economic and environmental benefits of renewable technology generation.

As an aside, planners told us they wish wind developers would work together better to counter the cumulative effects of turbines.

We touched on how planners are used to making the delicate balance between housing, commercial and transport developments and impacts on the environment, residents, and so on... they need to do the same balancing act for renewable energy: same skill, different type of development.

We looked at examples of policies that encourage low carbon and renewable energy development, outlining some of the different approaches taken including:

- Renewable energy or low carbon policies
- Sustainable development or construction policies that promote the energy hierarchy, focusing on sustainable building design, energy efficiency and then renewable energy
- Use of a carbon offset or carbon management fund to fund off-site or infrastructure development of low carbon or renewable energy (this will fall into 'allowable solutions')
- Stated targets for renewable energy generation

The current guidance is to focus on carbon reduction rather than energy targets, otherwise there is a danger of promoting inappropriate technologies that may push up carbon emissions rather than reduce them.

We looked at some policies, including Chorley Council's Sustainable Resources DPD and SPD, Milton Keynes' new Core Strategy and Stockport Council's new Core Strategy. Where there is experience of using the policy in practice, we found out how this works and what they are aiming to do. We discussed what happens when the Building Regulations 'catch up' with policies that have been aiming to improve on them, and the issues raised by stating that carbon savings must be made by installing renewable energy generation when these savings could be made through efficiency measures. Stockport's Core Strategy identifies different areas for different types of energy generation and shows that an energy plan is a very useful tool if you are dealing with complex energy planning.

What we aimed to show was that councils can put in place and successfully use policies that strongly promote low carbon developments and low carbon and renewable energy, and tough, visionary policies can help deliver energy security, safeguard against climate change and benefit the local economy.

We emphasised that councils need to communicate and engage on their vision for renewable energy, and that they need to state clearly in policy, on the websites and at initial inquiries by telephone they expect and encourage.

## Feedback and key discussion points

During the seminars there was lots of discussion on a range of issues around wind turbines - from lack of guidance on small wind turbines to MOD objections to any wind turbines in central Lancashire to the cumulative impact of several stand alone turbines and the fact that there is a heavy reliance on wind generation to meet the targets because it is the most effective and economically viable (and also most contentious).

Planners highlighted that the technologies are constantly changing and therefore policies and officers need to be able to handle changes and developments in technology.

Discussions about biomass touched on Air Quality issues and NOx emissions, and to what extent planners can be confident that a biomass boiler will be used, if there is also a gas boiler. A way to tackle this is to ask about their plans for supply of fuel and whether they have agreed a supplier.

How to get district heating schemes in place were discussed as there are opportunities for this in proposed developments in Central Lancashire and Blackpool. Other NW authorities are already working on this; Oldham is extending the district heating scheme it has in place, while Stockport is seeking to establish one through policy and new developments.

Feedback was very positive and there was not a problem with going over ground that people had already covered in other training; participants found that the overviews of the technologies were particularly helpful, especially discussing capacity figures.

Feedback raised some ongoing needs including:

- Similar sessions needed for Members: this is being provided in the autumn for Lancashire authorities and train the trainer sessions in this will also be available through the regional programme (from Krista Patrick - [Krista@clasp-nw.info](mailto:Krista@clasp-nw.info)).
- Model policy wording and examples of policy that is effective is needed (see guidance documents on the CLASP website)
- Evidence needed to support policy wording along with policy justification and enforcement
- More information on understanding the relationship with Building Regulations, Code for Sustainable Homes and other regulations
- Active dynamic networks of planners (both policy and development management) to share information on policy development and practical experience are needed
- Support with handling objections, particularly from vociferous protest groups.

The seminars were run as part of the Lancashire element of the Climate Change Skills Fund co-ordinated by Blackburn with Darwen Borough Council and were delivered by Gill Fenna and Louise Marix Evans of Quantum Strategy & Technology.

For more information please contact:

Gwen Kinloch, Environmental Strategy & Projects Manager, Blackburn with Darwen Borough Council. Tel: 01254 585394 or email: [gwen.kinloch@blackburn.gov.uk](mailto:gwen.kinloch@blackburn.gov.uk)

Or

Gill Fenna, Quantum Strategy & Technology. Tel: (office) 0161 924 2388 (Direct 01524 771396) or email: [gill.fenna@quantumst.co.uk](mailto:gill.fenna@quantumst.co.uk)