

Local Project Support Fund 2011/12

Project Report:

Lancashire Renewable Energy Capacity Study

- Resource assessment and deployment capacities for every Lancashire Local Authority for 2020 & 2030
- Local implementation of DECC methodology
- Lessons for all authorities on the pros, cons and pitfalls of target setting

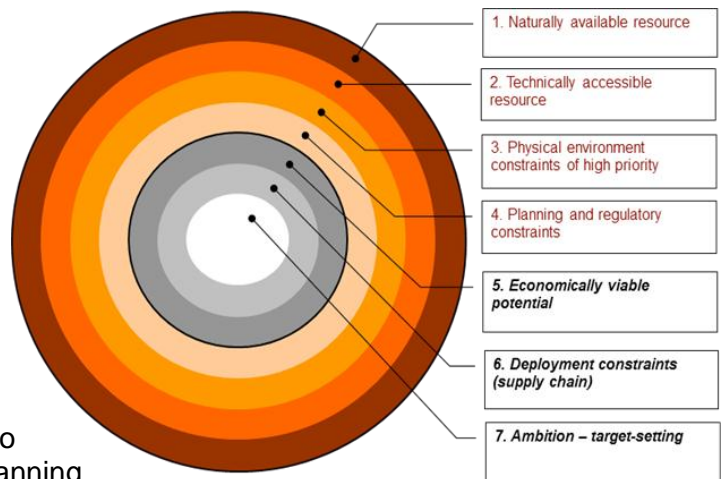
Project Leads

Lancashire County Council on behalf of all Lancashire District Councils, with delivery by SQW.

Rationale for the Project

The '[Northwest renewable and low carbon energy capacity and deployment project report](#)' was produced in September 2010 by SQW Ltd to assist Local Planning Authorities in preparing planning policies on renewable energy. However, the NW Study only presented results at a sub-regional level and, therefore, did not provide a useful evidence base for the development of district Local Development Frameworks.

The Lancashire Planning Authorities agreed that a consistent evidence base was needed and SQW were commissioned to further interrogate and disaggregate the Northwest results to the Lancashire local authority level and to also undertake exploratory work concerning the development of LA-specific renewable energy targets in core strategies and renewable energy planning policies.



Methodology

The methodology used is the nationally endorsed Department for Energy & Climate Change and Department for Communities & Local Government Renewable and Low Carbon Capacity Assessment Methodology for the English Regions (2010), referred to as the 'DECC Methodology'.

- Stages 1 to 4 identify opportunities for harnessing renewable energy resources on the basis of what is naturally available within the limitations of existing technology solutions and then addressing high level resource constraints in relation to physical environment and planning regulatory limitations.
- Stages 5 and 6 address deployment analysis and scenario testing, the DECC methodology, however, does not address these stages and the SQW RE:Deploy modelling tool was used to project forward current capacity with growth rates constrained by transmission, economic viability, supply chain and planning acceptance to translate technical capacity into a more realistic deployable potential.

The four constraints have been applied to each resource technology separately using metrics identified from national or local evidence. National benchmarks were used for economic viability and supply chain and after consultations with Electricity North West and Grid UK the transmission constraint factor was applied at 0% as there are no major connection issues in Lancashire, other than in the AONBs, where major developments are unlikely due to the landscape designations. Planning constraints were identified by reviewing planning acceptance rates which were then applied differentially to the different resource technologies.

- Stage 7 addresses setting targets for renewable energy.

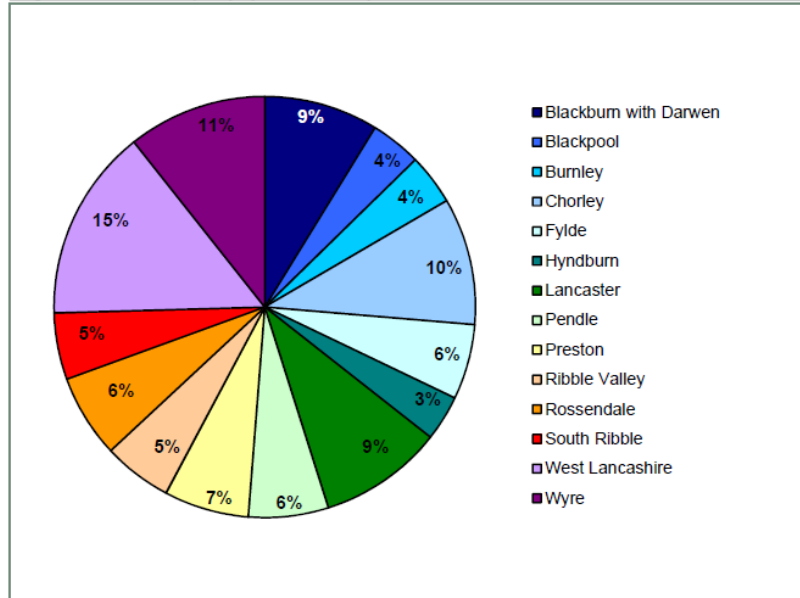
Resource Assessments and Deployment Scenarios

Resource assessments and deployment scenarios were originally completed for 2020 simply because this was the timescale used in the Northwest study; however, it became apparent that updating these to 2030 would be beneficial as this is a much better fit with planning horizons. **Each Local Authority in Lancashire now has resource assessment & deployable capacities by technology for 2020 and 2030**, as displayed in the table for Lancashire, **providing a consistent evidence base** and starting point for further analysis.

LANCASHIRE	Potential accessible resource (MW)		Deployable (MW)		Current installed (MW)
	2020	2030	2020	2030	2011
Wind	6,889	6,889	634.5	849.4	110
Biomass	98	102	18.2	20.4	11.7
Waste	117	136	34.7	17	37.9
Small scale Hydro	21	21	1.8	2.3	0.1
Microgeneration	3,526	4,364	117.7	278.2	1.4
TOTAL	10,612	11,513	807	1,167	161

The increase in accessible capacity appears small given the 10-year time period, but this is because the largest capacity identified is for onshore wind which is assumed not to increase over time, as is the case for other naturally occurring resources. The increase in 2030 is from resources related to human activity (e.g. energy from waste, building integrated technologies), with the largest increase being microgeneration. However, these figures are projected forward on the basis of future housing provision as set out in the North West Regional Spatial Strategy and with the recent and current economic downturn and its impact on house-building, the potential identified should be viewed as ambitious. Landfill gas currently provides a large proportion of installed capacity, but is a declining resource as a result of EU legislation requiring the reduction of waste to landfill.

Figure 3-2: Potential capacity by Local Authority at 2030



Source: SQIP

Deployable potential is projected forward taking into account future economic and legislative considerations such as slowing down of deployment of wind energy as the most commercially viable sites have been taken up and a reduction in landfill gas production in line with EU legislative requirements.

Overall the results suggest that 1,167 MW of renewable energy could be generated by 2030, this is a very significant reduction from the technical potential, suggesting that just 10% of this can be deployed. The most significant constraint is economic viability and whilst the long-term outlook for financial incentives is uncertain, costs of production and installation are reducing far more quickly than had originally been envisaged so it is possible that this constraint may become less severe in the future.

Demand is deliberately not taken into account as the DECC methodology and RE:Deploy modelling is intended to identify the potential capacity that can be brought forward regardless of local demand. The justification for this is that in contributing towards the UK Renewable Energy target, LAs should be looking to deploy the maximum possible within their areas, without causing detriment to the environment or local amenity, rather than satisfying their own economy- or socially-driven requirements. As a result capacity figures differ from the RSS targets which were based on the dated North West Sustainable Energy Strategy and apportioned across the Northwest's sub-regions based on demand.

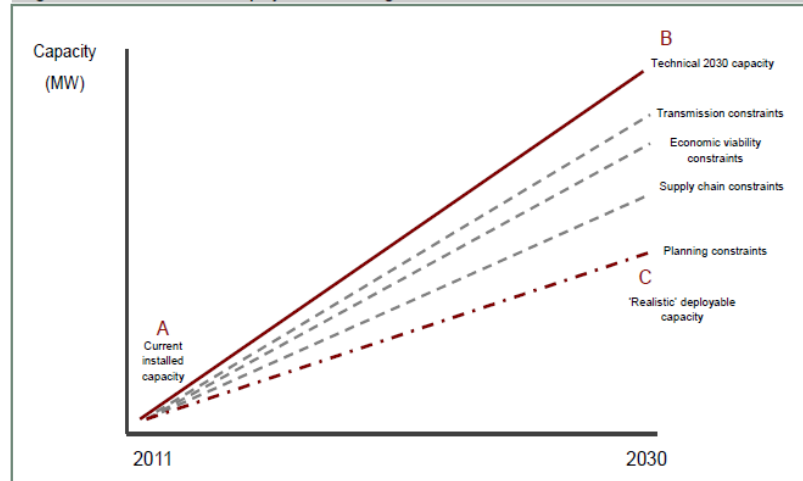


Target Setting & Policy Development

The DECC methodology explicitly refers to target setting, albeit on a regional basis, as the expected final 'Stage 7' of the process but the methodology itself only addresses the capacity assessment activities. There is currently no defined or accepted process for developing such targets and there is unlikely to be one in the near future.

Initially it was the intention that the study would identify targets for each LA based on the assessment of deployable potential. However, in Lancashire each LA is at a different stage in terms of existing targets and Local Development Framework Core Strategy preparation and a range of different approaches and evidence bases have already been used. It was, therefore, considered more appropriate to investigate the issues associated with target setting on a more qualitative basis and make recommendations for how best to take the process of target setting forward rather than arriving at firm numbers.

Figure 3-3: Overview of the Deployment Modelling



Source: SOB

Conclusions

The report considers the pros and cons of target setting and the issues in defining possible targets and makes a number of key conclusions and recommendations:

- It is difficult to articulate definitive targets without having a firm underlying policy intent which not all LA's currently have. The development of targets is also particularly challenging in the current uncertain environment for policy, technology and financial support.
- Overall, it is recommended that the assessment of potential should be used more as providing 'indicators of travel' or aspiration, rather than formal targets. As such these could be used as justification for core strategy policies (rather than be included within the detail of the policy).
- The capacity results from the study provide a useful basis for the development of indicators and for monitoring progress, whether formally stated in Core Strategy policies or used in the justification for these policies or in Supplementary Planning Documents. It is suggested that LAs without targets should take steps to include indicators regardless of their stage in Core Strategy preparation. If Core Strategies have been recently adopted, for example, such indicators could be included in Supplementary Planning Documents or in other relevant strategies.
- 'Targets' should be set as an absolute capacity aspiration, fixed at a certain date in the future, stated as an aggregate figure & set at LA level. The main reasons for this are pragmatism in terms of the capacity metric, a fixed date to provide a goal to aim towards to prevent the need

for constant revision and an aggregate figure to allow a flexible mix of technologies. The spatial scale has been set at the level of the LA, partly to reflect practical realities in terms of administrative boundaries and also in keeping with the Localism agenda.

- The DECC methodology was initially developed to provide a consistent basis for assessment across the English regions and applying the methodology to sub-regional and local authority levels has some drawbacks as the district results have used national and Lancashire-wide constraints. As a result variances between the assumptions made and the reality in each district may affect the ability to reach the capacities identified and it may be appropriate for LAs to undertake more specific landscape characterisation/capacity studies that can identify and characterise local constraints more explicitly, particularly :

in relation to onshore wind where figures are higher than LA's expected and where current deployment is low – it was felt that this is not as a result of local or political objections but relates to a lack of developer interest. This is exacerbated by the fact that the DECC methodology considers a wind speed of 5m/s at 45m above ground level to be viable whilst few developments on the ground are currently being realised at speeds of less than 6m/s.

Political acceptability and therefore the planning acceptance rate concerning onshore wind vary considerably between LAs and using a Lancashire approach is not appropriate.

- It is appropriate to consider taking into account more locally tailored variables when considering some constraints such as those identified above. Whilst this could result in a "patchwork quilt" effect across Lancashire, the push for localism lessens the need for a homogenous approach and developers are driven by the financial viability of their schemes regardless of the public sector targets in play.
- Deployable potential should be revised on a regular basis due to the considerable uncertainties surrounding the deployment of renewable energy.

To View The Report

The final report "Renewable Energy Target Setting & Policy Development, April 2012" and other associated documents are available from:

<http://www.claspinfo.org/resources/lancashire-renewable-energy-capacity-study>

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