

# **NLGN Issues Paper**

## **21<sup>st</sup> Century Assets: Energy generation**

### **Are there opportunities to access new revenue streams?**

This paper sets out the major issues affecting local renewable energy assets and outlines the potential fee payers that could allow councils to exploit these assets to develop revenue streams. It is intended to both provide background and provoke discussion at the roundtable on 13<sup>th</sup> June 2012.

Renewable energy is crucial to mitigating climate change and supporting the transition to a low-carbon economy. Renewable technologies offer a viable means of achieving the Government's aim of reducing green house gas emissions in 2050 by 80 per cent. Increasing renewable energy production would also help develop a more sustainable and secure energy supply, reducing exposure to fuel price volatility.

To combat increased demand and rising prices, many local authorities are taking positive steps to reduce consumption through energy efficiency measures. Some are moving beyond simply being consumers of energy, to become active producers. Renewable technologies offer viable, small scale electricity generation at a local level. They give local government an opportunity to exploit its natural assets and generate revenue by moving into the marketplace as an energy supplier and retailer, providing energy for local communities and businesses.

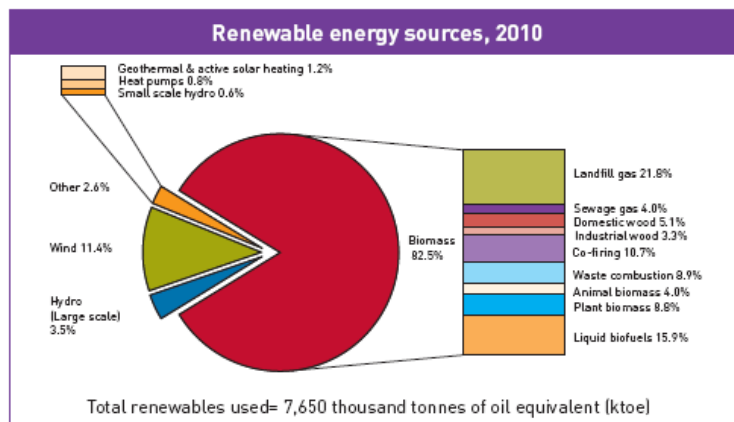
### **The importance of renewable energy**

Global demand for power and fuel are projected to push up energy prices over the next five years, with estimates of increases ranging from between 14 per cent and 25 per cent. Energy costs account for approximately 2 per cent of the total budget for local government, or £2.4 billion in 2011. At current levels of consumption, projected price rises would push the local government energy bill up by between £343 million and £613 million by 2020.

The UK is heavily dependent on energy imports. In 2011 the UK had a net energy import dependency of 36.5 per cent, the highest level since 1976. Local renewable energy presents a way to reduce this dependency. Of electricity generated in the UK in 2011, renewables' share increased by 2.5 per cent on 2010 to a record 9.5 per cent. Gas accounted for 40 per cent, coal 30 per cent and nuclear 19 per cent of the total.

There are a number of proven renewable energy technologies. Of these, biomass generates the most energy. There are currently 35 new Energy from Waste projects planned in the UK. The first full-scale UK gasification plant was commissioned in the Isle of Wight in late 2008, with start-up costs of £10 million and the potential to generate enough power for more than 2,000 local homes.

### **Chart 3: Renewable energy sources, 2010**



Source, ONS and DECC, Energy Trends (2012)

## A green investment gap

Renewable technologies are capital intensive. They typically require comparatively high levels of start-up finance, yet unlike fossil fuels they have low and stable running costs over the lifetime of the asset. Cheap and patient finance is often required and this is difficult to find – government grants and incentives, and innovative tools such as community share offers have an important role to play alongside traditional private investment. Green investment in the UK in 2009-10 totalled some £12.6 billion, with investment between public and private sectors fairly even. Although this is a significant amount; this figure is under 1 per cent of UK GDP and will need to be raised if the UK is to meet its 2050 target.

New financing models are required and local government is well placed to lead on the development of these, as the electricity generated from renewable projects could benefit both local communities and respond to national policy objectives. Renewable energy could be fed directly into local ‘closed grids’ and used by the local community, as has been the experience in countries such as Austria that have pioneered district heating projects based on a range of renewable energy assets. This would offset the amount of energy drawn from the national grid, therefore reducing expenditure. Equally, the electricity could be sold back to the national grid through mechanisms such as feed in tariffs, thereby creating a revenue stream.

Exploiting local renewable energy has a range of potential benefits. As with other infrastructure spending, investment in renewables could stimulate local economic growth and leave a lasting legacy. Communities that become producers could reduce local energy trade imbalances, releasing funds into the local economy that would have otherwise leached out to national energy companies. This could increase the circulation of capital within a locality, creating a virtuous circle of growth and investment.

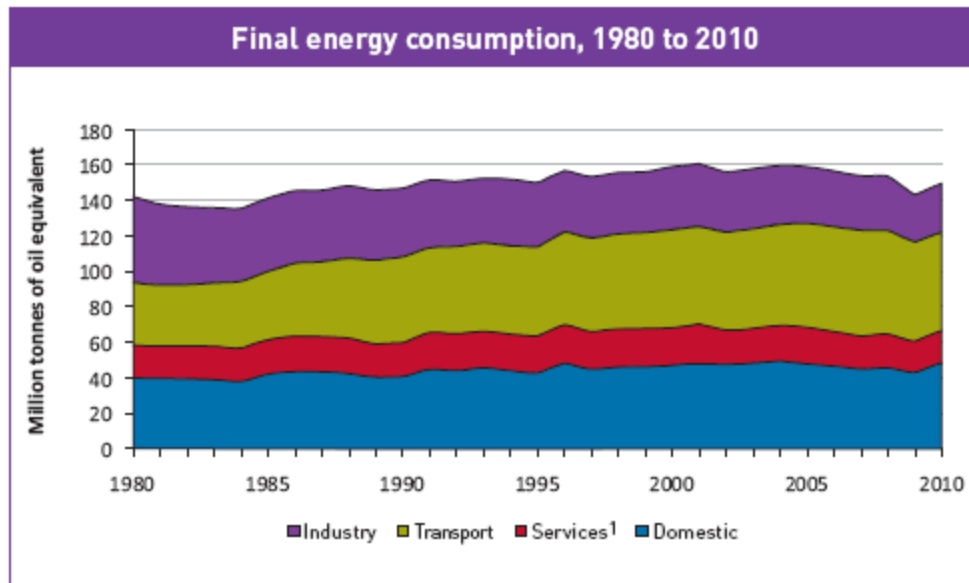
## Revenue streams from renewable energy assets

The Coalition Agreement set out the government’s ambition to “encourage community-owned renewable energy schemes where local people benefit from the power produced.” To encourage the development of such renewables schemes the government has introduced a range of incentives and finance mechanisms, including Feed-in-Tariffs, Green Investment Bank, Renewable Heat Incentive (RHI) Scheme, Green Deal and Low Carbon Network Fund.

There is a large market that local government could look to exploit. This includes consumers in both the private and public sector, and sectors from transport to services. Local energy generation could generate revenue streams from these consumers, and meet other policy

objectives ranging from economic growth to supporting at risk communities. By way, transport is a major consumer of energy and this has grown significantly over the last decade. This project will address transport as a separate theme, but there is obviously an overlap between local energy generating assets and a well-connected and efficient local transport system.

**Chart 1: Final energy consumption, 1980 to 2010**

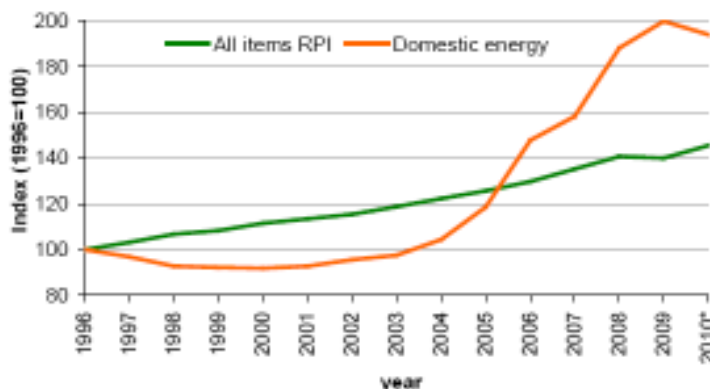


Source, ONS and DECC, Energy Trends (2012)

Domestic energy consumption also accounts for a high percentage of overall consumption. Councils have a ready market-place in the local electorate, particularly those residents in council owned property. Are there new services that councils could offer citizens? Could collective purchasing amongst council tenants provide stable demand and revenues for locally generated energy?

Such policy innovation would mitigate rising energy costs. Energy prices have risen significantly in the last five years, outstripping RPI and taking up more of the household budget. Fuel and poverty is a major household expenditure. In 2009 the average weekly household expenditure in the UK was £455.00; spending was highest on transport at £58.40 per week, recreation and culture at £57.90 per week and housing, fuel and power £57.30. In the long term, investment in renewable energy will combat this price volatility and help meet the challenge of fuel poverty.

**Chart 2: Domestic energy prices and the Retail Prices Index, 1996 - 2010**



However, despite government rhetoric on the potential for local authorities to shape this marketplace, a lack of clarity and inconsistency on incentives for renewables has hampered its development. For example, the cut in subsidies for solar panels has seen installations fall by 90 per cent since 1 April 2012. Further, the Feed-in-Tariff, that has been designed to increase the rate of return at which renewable projects are viable, has been set too low for many projects unless supported by further grant funding. HM Treasury's strict interpretation of State Aid requirements has closed down EU funding for many projects. Ironically, such funding provided crucial seed money for successful and self-financing projects in Austria and Germany.

There are a number of potential revenue streams that councils could consider accessing (see, non-exhaustive list below). Some of these have already been discussed in this paper; others provide further opportunities to be discussed during the meeting. Who are the most likely fee payers? What are the best services for councils to be offering?

1. Renewable technology	2. Revenue streams	3. Fee payer
<ul style="list-style-type: none"> <li>• Wind Power</li> <li>• Micro Hydro</li> <li>• Biomass</li> <li>• Energy from Waste</li> <li>• Combined Heat and Power</li> <li>• Wave and Tidal Power</li> <li>• Solar Power</li> <li>• Geothermal Heat and Power</li> </ul>	<p>Energy Efficiency Savings.</p> <p>Energy production revenue:</p> <ul style="list-style-type: none"> <li>• Closed grids</li> <li>• National grids</li> <li>• Energy companies renewables obligation</li> <li>• Feed-in-Tariffs</li> </ul>	<ul style="list-style-type: none"> <li>• General public</li> <li>- Individuals</li> <li>- Collective purchase</li> <li>• Private sector</li> <li>- Energy companies</li> <li>- SMEs / Corporate consumers</li> <li>• Public-third sector consumers</li> </ul> <p>[Central government subsidy]</p> <p>[EU grant]</p>