

NFLA Policy Briefing No.179



Date: 23rd August 2018

Subject: A Scottish Publicly-Owned Energy Company – the views of the NFLA

1. Background

This NFLA Policy Briefing provides its views on the potential for developing a Scottish publicly-owned energy company (POEC). The Scottish Parliament's Economy, Jobs and Fair Work (EJFW) Committee is seeking views on the merits or otherwise of such an entity. (1)

In its 2017 consultation on the draft Scottish Energy Strategy, the Scottish Government sought views on the potential role and remit of a POEC to help the growth of local and community projects. In its response, NFLA said it had long been supportive of local authorities establishing their own Energy Service Companies, and that any Government owned energy company should be established after full discussion with those authorities already looking at establishing a local energy company. (2)

With the publication of the final Scottish Energy Strategy in December 2017, the Scottish Government confirmed its ambition to establish a publicly-owned, not-for-profit energy company to support economic development and contribute to tackling fuel poverty. (3) The Government wants the Company set up by the end of the current Parliament in 2021. The Strategy went on to say:

*"The company may also have a role to play in helping delivery broader Government energy ambitions – **including the promotion of renewable generation and maximising benefits for local communities.**"* [emphasis added]

Earlier, in October 2017, the First Minister had made a high profile commitment to establish a not-for-profit, publicly-owned energy company, but its objective was more focussed on supplying energy *"to consumers at as close to cost price as possible"*. (4)

In March 2018, the Scottish Government published 'A Strategic Outline Case for establishing a POEC', by consultants EY. Unfortunately this relegated increasing the proportion of energy from renewable sources to phase-two of the agenda. NFLA believes this will be missing a great opportunity to create a very distinctive brand image for a Scottish Energy Company. (5)

There is no mention in the EY report of 'green' gas. Again NFLA believes this is missing a trick. A Scottish POEC should at least have a plan to move towards 100% green gas. Indeed there is very little mention of heating and district heating is relegated to phase two.

2. Responding to the Scottish Parliament's EJFW Committee's 'call for views'

The closing date for responding to the Committee on this matter is the **13th September**. Please email responses to: economyjobsandfairwork@parliament.scot

Or write to: Economy, Jobs and Fair Work Committee, Room T3.40, Scottish Parliament, Holyrood, Edinburgh, EH99 1SP.

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3. **How Scotland's new energy company could revive renewable energy in Scotland**

A Scottish POEC could offer consumers cheaper electricity than its rivals by offering environmentally-friendly generators long-term deals, according to Dr David Toke, a reader in energy policy at Aberdeen University, in a paper for the NFLA. (6) Such a move could give the Scottish Government's planned new utility provider a "*distinctive appeal*" that would rate higher than its rivals in terms of offering green energy. This could "*re-energise*" the renewable energy sector in Scotland and "*deliver electricity at competitive prices for the consumer*".

In his report Toke says it is not clear that the POECs which have sprung up over the past few years have necessarily achieved lower prices for the consumer. The most successful local energy companies seem to be those that have developed their own energy generation, especially through combined heat and power, based on 'private wire' arrangements. Unfortunately the EY Strategic Outline Case relegates increasing the proportion of energy from renewable sources to phase-two of the agenda for a Scottish POEC. Toke believes this will be missing a great opportunity to create a very distinctive brand image for a Scottish Energy Company.

Recent news from three English Local Authorities appears to back-up the argument that finding ways to develop new renewable energy resources in the post-subsidy world would be the best way forward for POECs.

Bristol City Council, for example, is celebrating record highs for solar energy production at its 4.2MW Avonmouth solar park. The project was installed on the same site as two council-owned wind farms in December 2015 with the generation sold to municipal energy supplier Bristol Energy via a power purchase agreement. From 1 May to 25 July the site generated 797,112kWh, almost 18% up on same period in 2017. Combined with the nearby wind turbines, the site generates enough energy to power over 4,000 homes and save over 7,000 tonnes of carbon dioxide from being emitted into the atmosphere. (7)

Portsmouth City Council (PCC) has continued to roll out solar schemes worth up to £10 million, despite plummeting feed-in tariff (FIT) rates. The council has recognised that despite the loss of government subsidy, a good financial return can still be achieved by taking a different route. By fitting solar PV to buildings that can use the electricity on site, the business case still stacks up. Instead of there being a payment of so many pence via a FIT, the council makes a saving on the electricity bill it would otherwise pay. (8)

In August Portsmouth City Council decided to scrap its energy company, Victory Energy, despite having already spent £1m on it, because of the future risk to public money. Former leader of the council and director of Victory, Cllr Donna Jones, feels this was a mistake. (9) Nevertheless the City Council has been one of the most successful local authorities at generating its own renewable electricity by investing heavily in commercial scale solar PV on its own buildings portfolio and offering Power Purchase Agreements (PPAs) and project management for other authorities and clients. Although electricity consumers won't now be given an opportunity to make savings from these projects, via Victory Energy, council tax payers and council service users will benefit. (10)

Similarly Forest Heath District Council has just announced that its 12.4MW Toggam Farm solar project had generated more than £1.3 million of income in its second year under local authority ownership. (11)

What renewable energy projects need, now that subsidies have mostly been removed are the offer of long term power purchasing agreements (PPAs) lasting say, 15 years. Around 1000 MW (roughly 10 per cent of Scottish electricity consumption) of onshore wind are available at a price probably less than wholesale power prices. Onshore wind and solar PV can now provide some of the cheapest electricity available. The Scottish Government, could through its energy company, ensure this is developed whilst at the same time delivering electricity to consumers at prices which compete well with other suppliers.

The Scottish Energy Company (SEC) could also steal a march on its electricity company competitors by offering a quality brand image. It would project itself as a new renewable energy scheme supplier.

Dr Toke's analysis concludes:

- The Scottish Government's commitment to start an energy company could re-energise renewable energy in Scotland and deliver electricity at competitive prices for the consumer.
- A Scottish Energy Company could potentially out-sell rival competitors by giving long term power purchase agreements to new renewable energy schemes.
- The Energy Company initiative could be backed by activities of the Scottish National Investment Bank to offer loans to new renewable energy projects.
- There are a number of potential renewable energy projects that can be implemented for prices at or below recent levels in wholesale power prices that such an initiative could support.

4. **Transforming Scotland's Energy Sector by 2030**

A discussion paper written by electrical design engineer Craig Berry for think tank Common Weal says Scotland could become a 'European giant' in renewables by 2030, driven by a new national energy company controlled at municipal level. (12)

Berry says the POEC should have five key objectives: reducing fuel poverty and eventually eliminating it; meeting 75% of energy demand through renewables; decentralising the energy supply; expanding research and development in green and smart technologies; and maximising social value through a not-for-profit approach.

He says: "*Municipalisation is critical in creating a transformation to a sustainable energy system based on energy efficiency and renewable energies. Creating a municipal energy company allows strong governance in the local energy market. The return for each municipality running its own local utility is significant when the focus is on affordable energy as opposed to increasing returns.*"

The paper looks at how to further enhance the energy sector in Scotland by looking at the infrastructure in place now, and how best to develop the energy sector so that it is better suited for renewable technology, electric vehicles (EV), autonomous vehicles, the shipping industry and the adaptability of new energy storage systems. Scotland's current renewable capacity is 9.3GW, but the potential is over 60GW. Scotland needs an energy strategy that is capable of building this infrastructure. The paper looks at two models; the Nordic development model and the German municipal model, and discusses how to influence a Scottish model for 2030.

The report recommends the establishment of a Scottish Energy Agency (SEA) to oversee the sector and set key targets and objectives, similar to those described by the German and Nordic models. The SEA will be required to prioritise renewable energy whilst keeping costs to the consumers as low as possible. The SEA and its subsidiaries should be run as a not-for-profit national energy company, with local authorities in control of supply, and generation controlled nationally. Scottish local authorities will run Local Energy Companies (LEC) in similar fashion to the German municipal method, increasing democracy of supply and decreasing energy costs. However, in some areas local authorities could look to combine electricity generation and supply companies to provide better service to its constituents. For rural areas, more community-based schemes might be developed that would be in the position to generate surplus electricity to the national grid.

On energy storage the report recommends establishing a National Battery Technology Innovation Centre (NBTIC) to drive the investment in battery technology so that Scotland can develop both gridscale and domestic scale batteries to boost the efficiencies in Scotland's renewable energy market to bring down costs and increase over-supply for exportation.

On heat networks the report says the Scottish Government should identify opportunities for district heating to encourage more investment in renewable heat. With Scotland currently meeting 5% of renewable heat, with a government aim to meet 11% by 2020, more should be done to bring this closer to 100% by 2030. Policies need to be implemented which allow Local Authorities to overcome financial barriers to district heating schemes.

Scotland needs to develop a strategy to increase the number of Electric Vehicles (EVs) on the roads. There are currently around 2.86 million cars registered in Scotland with 44% of greenhouse

gas emissions coming from cars. Scotland should aim for a target for EVs of 50% of vehicle share by 2030.

5. **Strategic Outline Case (SOC)**

The EY Strategic Outline Case (SOC) says that significant challenges exist in the Scottish energy market, including high electricity prices, a lack of consumer switching and, critically, the existence of significant levels of fuel poverty in Scotland. Nevertheless the SOC demonstrates that the creation of a Scottish POEC has the potential to successfully address some of the problems in Scotland's energy market. It says if the POEC is able to provide competitive pricing, it would be well positioned to develop a sufficient customer base.

This suggests the POEC needs to have a very clearly defined purpose, and that its business model may need to be designed in a way that is broader than just a focus on reducing the retail price of energy.

6. **Need for a well-defined purpose**

According to the SOC the stated objective of setting up a Scottish POEC is to deliver competitively priced energy to help alleviate fuel poverty in Scotland.

Yet we know that energy efficiency is the only permanent solution to fuel poverty. (13) Around one quarter of the energy currently used in UK households could be cost effectively saved by 2035 and this could increase to one half if allowance is made for falling technology costs and the wider benefits of energy efficiency improvements. (14) Energy efficiency measures have been crucial to offsetting energy price increases. (15) Primary energy consumption in the UK has now fallen by 19% since the start of the century even though our overall wealth has grown over that period by well over one-half. Overall electricity consumption continues to fall. Consumption fell by over 15% between 2005 and 2015. It went down, again, by 1% between 2016 and 2017. This means that we are now using less electricity than we were, say, in the mid-1990s. (16)

Work by Strathclyde University's Energy Policy Centre has shown, energy efficiency measures are likely to be more effective in fighting fuel poverty than cheaper tariffs, particularly when many who could benefit from switching to cheaper suppliers resolutely decline to do so. (17)

The SOC agrees that a POEC would need to be able to help to reduce energy bills by reducing energy consumption e.g. by further supporting the roll-out of energy efficiency measures beyond the current interventions. ESCos are a growing feature of the energy retail landscape, which are incentivised somehow to reduce customers' energy consumption. There are numerous companies providing energy services in the UK including local authority companies such as Leicester District Energy Company and Birmingham District Energy. The SOC mentions two Scottish Local Authority Companies – Energy for Edinburgh and Aberdeen Heat and Power.

7. **Competitive Prices**

The SOC also details considerable efforts underway to address the energy price element of the causes of fuel poverty and says these must be seen alongside wider policies to tackle income inequalities, and to improve the energy performance of homes and the efficiency of their appliances and heating systems. A POEC would need to consistently provide competitive tariffs to attract and retain customers.

However, out of 42 domestic energy suppliers offering services in Scotland, approximately half recorded losses in their most recent financial statements, including two of the 'Big 6'. Profit margins differ significantly across products and suppliers. In 2017, the pre-tax margins for the 'Big 6' providers were 11% for gas-only tariffs and -1% for electricity-only tariffs. Moreover, margins for smaller suppliers tend to be significantly lower than those earned by the 'Big 6'.

The SOC suggests that if the Scottish POEC were also able to invest in generation and accept a lower rate of return than other investors in generation (subject to State Aid restrictions) then it may be able to identify ways to reduce energy costs to consumers.

8. **Tariff Switching**

The SOC says a significant driver of high energy prices and fuel poverty in Scotland is the lack of customer engagement in the existing energy market, with low rates of customers switching suppliers due to a lack of trust in the market.

There are existing socially minded suppliers in the market who are focused on promoting their social values as a way of engendering trust amongst customers and encouraging them to switch their energy supply. These suppliers may typically be owned by a LA or housing provider. Examples of socially minded suppliers include Bristol Energy, Robin Hood Energy and Our Power. Since these not-for-profit are relatively new to the market, it is not yet apparent how sustainable their lower prices are or to what extent these suppliers have been able to reduce costs.

The SOC points out that the availability of energy suppliers differs across Scotland with limited levels of competition in some areas.

As the Scoping Report for the EJFW Committee points out, providing switching support for customers could prove to be just as effective as offering new tariffs.

9. **Conclusion on the SOC**

The SOC makes clear that the priority for the POEC is to acquire energy at competitive prices and pass onto customers at lowest possible costs.

It is only in phase 2 that the company would move on to increase the proportion of energy from renewable sources; incorporate other forms of energy supply, such as district heating, and the provision of energy efficiency measures.

The SOC estimates the cost of setting up a Scottish POEC would be £0.5m to £3.5m, with first year running costs of £2.8m to £9m. It highlights the risk to the Scottish government of making a loss. As former Labour Energy Minister, Brian Wilson points out that “the word “challenging” crops up a lot in the SOC. (18) In other words there is a risk that the new POEC never gets as far as phase two.

NFLA believes this is a missed opportunity, and that, in fact, a focus on energy efficiency and low cost renewables would have the effect of reducing energy costs for Scottish consumers. It would also reduce the risks of establishing a new energy company in a market with low margins and offer potential customers a unique offer – a company which supports the expansion of renewable energy in Scotland.

10. **EJFW Committee Scoping Note**

As part of the Economy, Jobs and Fair Work Committee’s scrutiny of energy policy, a research paper/scoping note on the topic was commissioned which looked more widely at what the purpose and model of such a company could be. (19) It suggested four overarching objectives that a Scottish POEC could have and suggests that taking a wider view of the purpose a POEC might ultimately fulfil, could help to deliver on these four wider overarching objectives.

- Creating new energy infrastructure platforms (investment in new infrastructure such as heat networks and providing new energy services to consumers)
- Accelerating wider energy system transformation (e.g. providing advice and guidance on programme and project management for other public bodies and social enterprises, thus helping the growth of local and community projects as suggested in the draft Energy Strategy.)
- Increasing engagement and participation in the energy system (promoting and supporting customers to switch supplier and engage with energy efficiency and low carbon energy technologies and energy services, boost local (co-) ownership of energy assets.)
- Reducing costs to consumers (recycle energy market profits back to consumers, lowering bills.)

11. **UK Experience of Publicly-owned and Not-for-profit Energy Companies**

The Scoping Note draws on a report from the Heat and the City Project at Edinburgh University (20) which examines what local authorities have been doing in the energy arena. The Note picks three examples of companies established which sell electricity and gas directly to customers.

In fact the Edinburgh University report looks much more widely at local authority engagement in energy, as does a more recent report from NFLA which is available here: http://www.nuclearpolicy.info/wp/wp-content/uploads/2018/05/A288_NB175_Decentralised_energy.pdf

The Edinburgh University report concludes that where local authorities (LA) are particularly engaged, they are oriented more to heat and energy efficiency than to electricity, suggesting that this may be the most effective route to LA energy provision and engagement in managing use. Heat and energy efficiency require changes at building and distribution infrastructure scales, where LAs have competence to plan and coordinate action, and which are proving difficult areas of policy for central governments.

The three examples looked at in the Scoping Note are Robin Hood Energy, Bristol Energy and Our Power.

The Scoping Note points out that local authorities across Scotland are becoming increasingly active in establishing ESCos, investing in energy projects and delivering on energy efficiency objectives, with an increasing diversity of approaches taken. A national entity has the potential to provide a central resource to support these various initiatives, but there is a risk it could stifle local innovation if it were too centralising and directive.

12. **Prospects for a Scottish POEC**

One fifth of Scottish homes are off the gas grid and off-grid areas tend to have higher rates of fuel poverty than on-grid areas. The role of a POEC in relation to tackling off-gas grid fuel poverty merits further consideration, in particular in relation to consumers with electric heating, given the low margins in the electricity supply market and the likelihood of a publicly owned supply company being able to offer significant tariff reductions for electricity compared to other suppliers. For these consumers, providing support for switching may be as significant as offering a new tariff in the market.

The scoping review notes stakeholders at the EJFW's inquiry on the draft Energy Strategy wanted to see a POEC that could take a strategic oversight role in the energy sector, driving innovation and supporting investment in and deployment of low carbon energy technologies, coordinating energy efficiency activities to achieve a step change improvement in Scotland's housing stock, and supporting local energy systems and helping to drive down the cost of energy, rather than just a narrow focus on driving down consumers' bills and fuel poverty.

13. **Green Gas**

There is virtually no mention in the EY report or the Scoping Note of green gas. Again NFLA believes this is missing a trick. A Scottish POEC should at least have a plan to move towards 100% green gas and renewable heating.

The table below gives a selection of companies offering 100% renewable electricity tariffs and showing what these companies are doing about gas. All of the companies offering a proportion of green gas appear to produce this from anaerobic digestion. A Scottish POEC could look at producing hydrogen via electrolysis using surplus renewable electricity. This could give the utility a way to balance intermittent renewable electricity supplies and give it another unique selling point.

100% Renewable Companies	What they say about gas.
Bulb	10% of gas from anaerobic digestion of pig slurry; planning to grow the proportion by working with more green gas producers to support this exciting new technology.

Ecotricity	12% of gas from anaerobic digestion of gas; planning to grow that percentage by building our own green gasmills,
Green Energy	100% green gas, 100% renewable electricity
Good Energy	6% of gas comes from anaerobic digestion of manure and sewage; And to make it totally carbon neutral, emissions from the gas our customers use is balanced through verified carbon-reduction schemes that support local communities in Malawi, Vietnam and Nepal.
Octopus	The Super Green Octopus Tariff offers 100% renewable electricity, and full carbon offsets for gas. This means that from an energy point of view your home is carbon neutral – leaving no footprint on the planet
Ovo Energy	Green Gas upgrade with guaranteed 50% renewable gas and we'll carbon offset the rest.
Pure Planet	All our power is backed by REGOs. All our carbon offset gas is backed by CERs (Certified Emissions Reductions) giving you peace of mind.
Tonik Energy	We are a green energy supplier, providing 100% renewable electricity and 10% green gas as part of our offer.

14. Conclusions

The NFLA supports the idea of establishing a Scottish POEC, but is concerned that the promotion of new renewable energy projects has been relegated to a second phase. There is a risk that this second phase may never happen.

A POEC which promotes energy efficiency and low cost renewable electricity would have the effect of reducing energy costs for Scottish consumers. It would provide a unique offer to Scottish consumers – a company which can provide cheap low carbon energy.

A POEC should support and assist work already going on in local authorities and local communities, rather than setting itself up in competition with other community initiatives. A POEC should also support the innovative work on developing hydrogen and green gas currently going on in Scotland.

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