

## A new energy infrastructure

### Note from the workshop on 3 March 2010, Royal Society of Arts

Consumer Focus hosted this workshop to discuss the think-piece *A new energy infrastructure*, published at the end of November 2009.

Participants included staff from DECC, energy companies, the regulator, local authorities, trade associations (representing energy efficiency, renewables and combined heat and power), a social marketing consultancy and think-tanks. The Energy Saving Trust, Local Government Association and Professor Martin Cave from Warwick Business School led discussions.

#### Introduction – Larry Whitty

‘Consumer Focus produced this paper because it wished to ensure that the transition to a sustainable and potentially more decentralised energy system was done with consumer interests in mind. It was important that the needs of vulnerable consumers were protected, domestic consumers were fully engaged with and that normal consumer interests were safeguarded. We believed that local government has an important role to play in bringing this about.’

#### Summary of the paper – Prashant Vaze

‘There is a need to think about consumer protection, reduction of emissions from heat and power, fuel poverty alleviation and investment in electricity and gas networks in an integrated fashion.

‘There was a particular need to look at some *communal* technologies such as district heating, large biomass combustion and external insulation in an area-based manner. These could not come about through the market alone, and an unplanned piecemeal deployment would be unnecessarily expensive. Local Government had a major role to play in defining the vision for their community and working through local strategic partners in generating the political consensus.’

The paper proposed five steps:

- Local Government defined a plan for rolling out communal assets (such as external energy efficiency measures, new network development and decentralised renewable)
- Construction and operation of this investment was offered to the market on a franchise basis
- The regulator would establish a new class of regulated assets which would ‘purchase’ the approved investments once complete to ensure investors would receive a regulated return on their investment
- Ofgem and Energy Saving Trust would advise the local authority about contract design, parcelling out of work and help select the least cost bid(s). Neighbouring local authorities might want to act in concert.
- Design, build and operation of these assets could either be undertaken by infrastructure companies (either traditional energy companies or through new community energy infrastructure providers). Supply companies or ESCOs would remain the customer interface and payment to the infrastructure companies would occur behind the scenes.

'A number of conditions would need to be met to bring this about. To be attractive to customers their bills would need to be lower than they would otherwise be, if new monopolies were created (eg for the production and transmission of heat) there would need to be stiff financial sanctions if customer performance criteria not met. Investors needed to access to low cost capital. Local Government officers would need adequate training and resources.

'Consumers would pay suppliers/ESCOs their share of the servicing the investment made in the new infrastructure. This would be analogous to the charges collected for distribution and transmission networks that are recovered through energy bills. The only difference would be that there was a higher level of personalisation. For instance only residents living on streets where district heating had been installed would pay this charge.'

The audience asked about integration between the supplier / ESCO and the network company. Consumer Focus believes that the European Court of Justice's decision on Citiworks might have made the vertical integration of generation, distribution and supply unlawful.

'Most consumers would only agree to such a change if their bill was lower than it would otherwise have been. This was actually quite a hard test to satisfy since the value of the fossil fuels saved over the lifetime of the infrastructure was uncertain (though likely to rise), also the cost of finance for the project partly determined by the policy environment. The more freedom individual customers had to delay payment for the infrastructure or to walk away from the investment the more risky the project and the greater the cost of finance. A 'take or pay' contract was clearly a more financeable proposition than a voluntary enrolment to the energy infrastructure. The issue of whether the consumer or the investor bore this risk was a matter for policy makers. A more gentle option might be assume customers opt in unless they actively opt out. Different approaches might be appropriate for different measures depending on the importance of the economies of scale and the 'excludability' of the measure. External insulation was clearly excludable so might work best as an opt-out contract. On the other hand a charge to finance the capital cost of a local CHP from waste or biomass plant was a sunk cost once incurred and investors would not wish to be confronted with opt-out.

'Consumer Focus did not consider the community infrastructure as a complement to PAYS for communal measures (like heat pumps, internal insulation or domestic renewable). It might use the same legal mechanisms to collect money from the customer.'

**Marian Spain** from EST spoke about the consumer experience. She argued that consumers needed a simple and straightforward interface with the infrastructure. They did not need to know or understand issues about risk apportionment, and money flows that takes place behind the scenes. A trusted intermediary was needed to advice on measures and there needed to be appropriate safeguards and redress when things go wrong.

Local Government has the trust of people but on the most part local authorities are not really doing much in this area. The policy has to work for all housing stock and owners. There was a particular issue about communal heating schemes, which were seen as too socialist, restricted choice.

A lower cost to consumers is important but there was no compelling evidence that bills would be cheaper. Difficult to treat homes as their name suggests expensive to decarbonise.

Can we make this cost acceptable? Surveys show people are prepared to pay up to £900 on energy efficiency, to take loans around £3,000 and want 0 per cent interest. The really inconvenient truth is that many people do not want to deal with climate change, 20 per cent never will.

**Martin Cave** thought the proposal sophisticated and the paper and discussion so far drew out many of the main issues. The idea of running franchises to 'design, build and operate' public goods was not especially new and had been applied to, for instance, the railways. He suggested making the franchises indefinite with periodic review points rather than opening up the contest every so often. There were problems with having fixed term franchises. Companies were reluctant to invest towards the end of the franchise period and transferring assets (and liabilities) between companies could be expensive and legally fraught.

He agreed that keeping the cost of capital to the network company was crucial to the viability of the proposal. Investors would provide lower cost capital if they saw a guaranteed revenue scheme. If the idea of take or pay contracts funded from consumer bills was deemed politically unattractive the other option was for Government to stand behind the contracts to relieve the investors of the risk of low use or slow uptake of the community energy infrastructure. This is what happens in rail regulation

**Abigail Burridge** from LGA spoke about local authorities' capacity and readiness to lead area based schemes to reduce local emissions and implement local carbon frameworks. She thought the proposals asked a lot from local Government but that there was a willingness on the part of local Government to rise to this challenge.

Local Government already has experience in the separate tasks being discussed. It already liaises with local interests and develops local consensus, it enters complex contracts and manages large projects. Local councillors are elected and are locally accountable. What is required is the up-skilling of existing staff especially planners. There was an increasing recognition that this is part of a long term vision of local Government but the current context is one where staff are under pressure to deliver more from less and there are cuts in non-core activities.

The recently published household energy management strategy envisaged local Government adopting a more strategic role in local energy and energy efficiency planning. There are nine pilots on local energy underway. It was important for local Government to be able to access relevant data (ie who has insulation or other energy efficiency measures).

The following points were raised in the discussion.

- There are already 600 district heating schemes in the UK. Many of these are in the social housing sector and it would make sense to roll out CHP to these schemes. This was not a novel idea. Sheffield Council has an extensive district heating scheme funded at low interest rates by a Japanese bank
- There were risks to local authorities: one London local authority franchised a scheme – projected the costs incorrectly and Councillors were voted out
- Denmark's municipal authorities have used similar approach but they a different local government structure
- Private finance initiative (PFI) was seen as an expensive way of delivering capital and audience were unsure how the franchise differed from PFI contracts

## Heat markets

- Provision of communal heat is completely unregulated. The heat network is a natural monopoly and should eventually become a regulated activity. The generation of heat is presently a monopoly too
- There was a mixed view about whether consumers would be hostile to district heat once it became established. Systems in Denmark with modern controls were popular and people exhibited a NITILI (Now it's there I love it) response

## Capital costs

- If using private finance then cost of capital will be higher. However it was accepted that the taxpayer would not be able to fund this level of investment.
- Audience was unclear why the current system of financing used by CERT, RHI and RO should not be extended. What was the problem with meeting costs through *everyone's* energy bills?
- Obligations on suppliers might be an option (area based approach). Others accepted that external insulation is very expensive and could not be smeared onto the general energy bills

## Other points

- One company said it was already working with many types of schemes and community models and it was keen that local Government did not squeeze life out of innovative schemes
- There was a trade-off between providing consumers capacity for competition and switching and keeping costs down
- Opt in/opt out could make investors very worried – has to be a monopoly to work
- One person felt that a scheme where the infrastructure provider had a strong local connection and where profits would be retained within the community would be popular

## Close/Next steps

- Prashant said we would continue to discuss the ideas from this paper with interested parties but CF was not planning to do any more work
- CF has new project on the justice aspects of different financing models used in energy
- CF also planned to work with EST on behavioural issues