

## Delivering Water Neutrality: Measures and funding strategies

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A successful programme of water neutrality will combine water efficient new homes, water efficient retrofits installed in existing homes, more extensive metering coverage, promotional campaigns and possibly variable tariffs. Such a programme will demand significant organisation and resources.

### Barriers

In theory water neutrality could be delivered entirely by the efforts and funding of the water industry. Ofwat would allow water companies (or a group of water companies) to pursue such a strategy, as long as it could show that it was the best option for managing the supply-demand balance. In practice, however, several factors deter a unilateral move towards water neutrality by a water company:

- Water neutrality is untested and therefore risky compared to providing additional water supply.
- As the cost benefit analysis shows, the benefits of water neutrality do not fall entirely to the water companies. In fact, if the water industry were to pay all the costs of water neutrality, it would not recoup those costs.
- Under current regulation the cost of large-scale retrofitting would be classed as operational expenditure. This means that Ofwat would not allow this expenditure to be recouped in water bills. This is in contrast to supply-side measures, which is classed as capital expenditure which can be recouped.
- The regulations require least-cost solutions, which water neutrality may not be seen as being.
- Where development crosses water company boundaries (e.g. Thames Gateway) this would require cooperation between water companies in a way that has not been done before.

Many of these barriers to water neutrality exist because the current system does not take into account potential benefits beyond the water industry. Such benefits include reduced energy bills, lower greenhouse gas emissions and an enhanced environment. These benefits do not fall to the water industry itself, and it is therefore important that the costs do not fall entirely on the water industry.

## **New and collaborative approach**

No existing model can be used or adapted to deliver and fund water neutrality. Instead it will require an innovative approach which will rely on the collaboration of the following parties for implementation and funding.

### **Developers**

The key role for developers in the delivery of water neutrality is in constructing new homes which are more water efficient than building regulations require (e.g. meeting standards of the Code for Sustainable Homes). In most cases, for developers to bear the costs of higher standards, they will need to be compelled by the planning requirements or encouraged through tax breaks. If it is the former, the higher costs are likely to be passed on to purchasers of the new homes or in the form of lower land values. However, where developers wish to promote the sustainability of their homes, they might voluntarily accept the costs of building to a higher standard.

In some cases developer may be the driving force behind water neutrality. For example, the developers of an eco-town in a water-stressed area may commit to achieving water neutrality.<sup>1</sup> In this case they may lead the entire strategy and provide some of the funds. Within their development they may ensure low water use through by appointing an inset company on the condition that water efficiency targets are met and maintained (see more on inset appointments below).

There is possibly potential for developers to contribute funds to water efficiency in *existing* homes through the Community Infrastructure Levy (CIL). This is a new levy that councils can charge on development. There is, however, uncertainty over what the CIL can be used towards. Current guidance says that

*To the extent that demand management measures can be defined as infrastructure, the Government is keen that CIL should be used to fund them.*<sup>2</sup>

This might be interpreted as meaning that the CIL can be used to fund community rainwater-harvesting or grey water, but not other demand management measures. However, this seems unnecessarily restrictive and we would support its use for a wider range of measures.

A further incentive for developers could be provided if water companies granted discounts on its standard infrastructure charge for water efficient new houses. Ofwat is exploring this possibility.

### **Water Companies**

The role of water companies is central as they will be responsible for installing and operating metering as well as applying and administering any variable tariffs. They will also have a role in retrofitting water saving appliances.

Water companies are unlikely to fund an entire water neutrality programme, but they can be expected to contribute as they will derive significant benefits. As explained above, these benefits will largely result from a reduced need to supply water compared to the

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<sup>1</sup> The Eco-towns PPS states that eco-towns in areas of serious water stress should aspire to water neutrality.

<sup>2</sup> *The Community Infrastructure Levy*. CLG, Aug 2008.

business-as-usual case. Water companies already have to achieve mandatory water efficiency targets set by Ofwat, and they could concentrate their efficiency efforts within the water neutral zone.

A further source of water industry funding could come from water companies' pursuance of the Sustainable Economic Level of Water Efficiency. This allows companies to carry out water efficiency activity beyond the mandatory targets where they can demonstrate it is economic and sustainable to do so.

### **Ofwat**

Ofwat can support water neutrality by supporting water company plans to achieve it. These plans are likely to include widening metering coverage, introducing variable tariffs and extensive deployment of water saving retrofits.

### **Householders**

Delivery of water neutrality will require a significant fall in water demand in existing homes. This reduction can be delivered in part by water companies expanding metering coverage and introducing variable tariffs. However, it will also depend on a high proportion of householders agreeing to install more water efficient appliances, such as low-flow showerheads, dual-flush toilets and efficient dishwashers. If people are to do this on the scale required, they will need incentives in the form of refunds, grants and tax breaks.

Incentives should be supported by a vigorous publicity campaign aimed at people in both new and existing homes. The campaign should aim to persuade people to use less water, not only by installing retrofits but also through behaviour change.

### **Local Authorities**

Local Authorities are well-placed to help direct implementation of water neutrality, and possibly to coordinate the entire programme. They have a good knowledge of the types of buildings in their locality and the socio-economic status of residents. Local authorities are also in a good position to help engage the public and encourage householders to install retrofits.

Local authorities are a potential source of funding. Many local authorities already offer council tax rebates to residents who install energy efficiency measures. These rebates are jointly funded by the councils and energy companies. Similar schemes could operate for water efficient products, especially where they save hot water.

A clear incentive for local authorities to take an active role in delivering water neutrality is that it will help them achieve several national indicators in the local government performance framework:

- NI186 – reducing per capita CO2 emissions.
- NI187 – tackling fuel poverty. Local authorities' financial contribution could specifically fund retrofits for those households in fuel poverty.
- NI188 – adapting to climate change. Reduction in water resources is one of the key risks of climate change.

Local authorities could combine installation of water-saving retrofits with their activities improving the standards on public sector housing.

### **Central Government**

As long as water neutrality remains untried, there are substantial barriers to it being achieved. The Government can play a key role in overcoming these barriers. One potential course of action could be for the Government to commit to achieving water neutrality in the Thames Gateway. This could involve Government bringing together the relevant parties to explore how water neutrality could be achieved together.

Government could also support the programme by requiring all government buildings within the water neutral zone to install water efficient devices.

### **Environment Agency**

The Environment Agency can provide technical guidance on water resources and water conservation to support a programme of water neutrality.

### **Homes and Communities Agency (HCA)**

A strategy of water neutrality will support delivery of housing growth in water stressed areas. As the national housing and regeneration delivery agency for England, the HCA will have an interest. This will be especially true in the Thames Gateway for which the HCA is the delivery body. The HCA may be a source of funding for water neutrality in the Thames Gateway and elsewhere.

### **Energy Companies**

There are compelling reasons to involve gas and electricity companies in a programme of water neutrality. Under the Carbon Emissions Reductions Target (CERT) energy companies are required to deliver domestic energy savings targets through programmes of retrofitting energy savings measures in existing homes. It makes sense to combine such programmes with water saving retrofits. This would be especially cost-effective for those measures which save both water and energy, such as low-flow showers and taps. If a water neutrality retrofitting programme was able to contribute to their aims under CERT, energy companies may well decide that participation is in their interests.

### **Inset Appointments**

In certain circumstances water industry regulations allow a limited company to provide water services for a specific area in place of the incumbent provider. One such circumstance is a *new development*, and the developer is free to appoint a water service provider of their choosing. This presents an opportunity in that a developer committed to water neutrality could require the appointed company to meet specified conditions on water efficiency.

The appointed company could operate in a similar way to energy service companies – guaranteeing the supply of water, but with incentives for its customers to use less. Ofwat is increasingly allowing such *inset appointments* for new developments, though it must be satisfied that consumers will be no worse off than they would be with the former water

provider. The Government is currently assessing ways of introducing more competition into the water industry, and this may in future lead to greater access for new service providers.

### **Non-domestic sector**

There is a large potential for demand reduction in the non-domestic sector and in some areas this sector may be able to deliver a large proportion of the savings required for water neutrality. This potential depends on the proportion and nature of non-domestic water use in the area. Government could take a lead in this area by improving the water efficiency of public buildings.

### **Advisory Services**

Several advisory services could play a useful role in the delivery of water neutrality. The Energy Savings Trust has recently committed to add water saving to its traditional energy saving activities. Their expertise in planning and delivering efficiency campaigns will be useful.

Organisations such as the Envirowise, NISP and the Carbon Trust provide free advice to businesses on water-efficiency. Their support and expertise will be useful in helping to reduce non-domestic water use.

### **Community engagement**

A wide range of local organisations, such as schools and voluntary groups and community groups should be involved to help promote water neutrality with local communities.

### **Getting started**

As water neutrality is a not yet embedded in any planning process, its delivery will depend on someone proactively making a commitment to its delivery. Possible prime movers are developers, local authorities and water companies.

In developments built to high environmental standards, such as eco-towns, the developer may propose and pursue water neutrality. In the particular case of the Thames Gateway, water neutrality may be instigated by the Government, which has committed to develop the eco-region sustainably. In other cases it may arise from an existing partnership such as the Anglian Regional Water Partnership in the East of England. This partnership involves most of the parties who would be involved in a strategy of water neutrality and the concept has been discussed at its meetings.

Once it has been decided that water neutrality is, in principle, a worthwhile aim, the instigator should assemble the various parties necessary for delivery. This group must agree their respective contributions to implementation and funding, and how to overcome challenges. Part of the instigator's role is likely to be to persuade some of the parties to become involved.

## **Frameworks to help delivery**

### **- Local and regional planning**

Water neutrality could be supported by local and regional planning strategies. Milton Keynes Council's Sustainable Construction Policy is one potentially useful approach. This policy, part of their Local Plan, requires new development to meet a range of sustainability standards, including water efficiency standards. New homes should be built to ensure a maximum water use of 105 litres per person per day – measured according to the criteria of the Code for Sustainable Homes and equivalent to code levels 3 or 4.

Section 106 agreements probably cannot be used to fund water neutrality. This is because they can only be used to require developers to pay for services which are the local authorities' responsibility to provide.

### **- Water Cycle Strategies**

Many local authorities are leading the development of water cycle studies to identify development-related risks to water resources, water quality and flood management. The development of these studies involves the collaboration of most of the parties who would need to work together on water neutrality. Where water cycle studies identify reveal significant risks they lead to the development by all partners of a water cycle strategy. In water-stressed areas, a water cycle strategy may be the ideal starting point for the delivery of water neutrality.

### **Marketing and Engagement**

Securing widespread public support must be a central factor of a water neutrality. Engagement strategies must inspire residents to consciously use less water and to retrofit water saving devices at a far higher rate than achieved in previous trials.