



UK Demand Response
Association



Reversing the current

A manifesto for putting energy users first



About the CHPA

The Combined Heat and Power Association (CHPA) is the leading advocate of an integrated approach to delivering energy services using combined heat and power and district heating. The Association has over 100 members active across a range of technologies and markets and is widely recognised as one of the leading industry bodies in the sustainable energy sector. For more information about the CHPA www.chpa.co.uk



UK Demand Response Association

About the UKDRA

The UK Demand Response Association has been created to represent the demand response industry participating in the UK with one voice on the subjects of developing and overseeing policies, strategies, objectives and plans for demand response and peak reduction programs and incentives. It is the mission of the Association to help develop technical standards and policy recommendations that allow demand response resources to participate in the capacity, energy and wholesale markets.

Reversing the current | How to put energy users first

The energy debate is centre stage. Decision makers and the voters they represent increasingly feel that the market does not deliver fair value and that policies to move to a secure, low carbon energy system are costing too much.

The result is growing mistrust across the energy sector. If we are to rebuild trust, the debate needs to move beyond switching suppliers, towards placing control of energy back into the hands of the energy user.

When the user is at the centre, the old divide of demand and supply evaporates, replaced by a single question: How do I meet the needs of the user in the most cost effective way?

By focussing on the user, we have a genuine chance to cut emissions, make businesses and the public sector more efficient and competitive, and lift the vulnerable from fuel poverty.

There are three clear policy measures which would help achieve this vision:

- **Place the bill payer at the centre of the energy system**
- **Enact a 'Consumer Value Guarantee' for energy policy**
- **Empower local authorities to meet local energy needs**

Our system now



A consumer focussed system



Place the bill payer at the centre of the energy system

In today's electricity market, regulations and policy are a product of our historic state-owned, centralised system and was never designed for small-scale participation. The emergence of new technologies and revolutions in communication and data management give users access to new, cost-effective, local energy options.

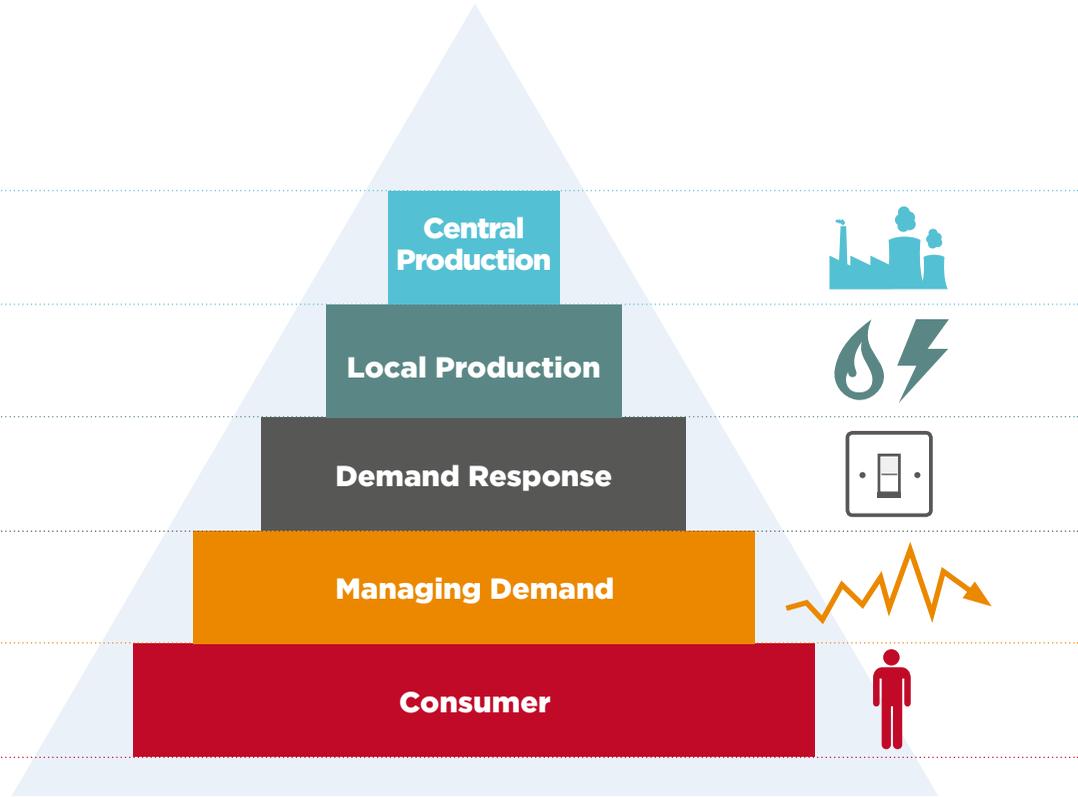
The current approach has resulted in a patchwork of policies, with conflicting incentives, that do not value end-user participation. Currently no one has a role in integrating different energy policies within DECC or across departments, leaving the energy user to run from pillar to post.

The Government should instead commit that in future, all policymaking will start from the user's perspective.

Designing a comprehensive framework for a user-centric energy system would enable all parts of DECC to have a reference point in policy design.

Champions within each directorate in DECC would represent the policy interests of householders, public sector, industrial and commercial energy users. These champions would be directly responsible to the Director General of DECC and would ensure policymaking is more focussed on the energy user than ever before.

This would create a simpler, more joined-up energy policy and provide confidence to energy users that their interests are being safeguarded.



How we can better include the bill payer in the energy system

There are two areas of energy policy where the policy design has ensured that energy users struggle to participate, all because the policymaking process left these users at the periphery.

By returning the energy user to the heart of the policy making process, we could instead be making sure these policies work for them first, as they are the ones which fund and support the costs of our energy system.

- Ensure fair access to the electricity market for all.** To achieve a fair price, local generators and users actively managing their power demand (known as demand side response or DSR) need simple access to market information. In Denmark, where half the power generation is decentralised, small energy users, with support from market aggregators, can easily access the market to provide a range of cost effective system services. An incoming Government should use the opportunity of current scrutiny of the energy market to commit to ensuring effective market access for all energy users and generators.
- Open Capacity Market to all users.** The Capacity Market has been designed from the perspective of large power plants. As a result commercial and industrial energy users are largely excluded from providing generation or DSR capacity. Cost effective capacity services are being overlooked in favour of central power plant options increasing the cost of the policy to all consumers. The Capacity Market needs to be refocused to give effective access to all users to offer cost effective demand management and generation services.

Electricity demand reduction: saves up to

£9.6 billion

Building new gas CHP capacity: saves at least

£90 million

Using renewable heat on heat networks: saves

£1,600

in RHI payments **per household**

The Consumer Value Guarantee

Consumers increasingly question whether they receive fair energy value, especially as both energy and policy costs rise. In turn Government is under growing pressure to show that policies on energy security and emissions reductions provide good value.

To rebuild consumer and taxpayer trust, a new Government should make a commitment to taxpayers to meet our energy policy aims for a secure, decarbonised system at best value: a Consumer Value Guarantee.

Recent DECC analysis has found that more cost-effective options for meeting commitments for a secure, low-carbon energy system are often missed in Government policymaking. The result has been that energy policies have been more expensive for consumers than they need to be. Under a Consumer Value Guarantee, Ministers would test all energy policies, as part of their Impact Assessments, against alternative options. Testing proposed supply-side solutions against demand-side solutions in Impact Assessment modelling, will allow consumers to benefit from the best value approach.

What the Consumer Value Guarantee could mean in practice

There are a number of policy and technology tools which could provide better bill payer value in delivering a secure, low-carbon energy system.

By applying a Consumer Value Guarantee to proposed energy policies, some potentially better-value options would be better considered, including:

- **Better integration of Demand Side Response (DSR).** Industrial and commercial energy users can temporarily reduce power demand for non-essential uses to help manage the electricity system; this is known as demand side response and already happens in the UK. But additional DSR resources to the scale of a nuclear power station, although available, are not currently used. National Grid expects DSR services will be up to 900 times cheaper than building power stations to keep the lights on. In one year alone in a major US power market, DSR participation in capacity markets saved US consumers \$12 billion.
- **Dedicated support for gas combined heat and power (CHP).** This energy efficiency technology reduces energy costs for businesses and householders by up to 30%, reduces gas imports to the UK by £600m every year, and cuts millions of tonnes of CO2 emissions. DECC analysis shows dedicated support for new gas CHP investments would reduce bill payers' net costs for the Capacity Market by £90m by 2025, while also strengthening UK industrial competitiveness.
- **Deploy more heat networks.** District heating is a network of insulated pipes which deliver heat to homes and offices. By using cheaper and lower-carbon heat sources, like waste and renewable heat, well-designed heat networks can significantly lower bills and emissions. For example:
 - Delivering renewable heat through networks saves taxpayers up to £3m for every 1,000 homes served compared to equivalent individual solutions.
 - When coupled with heat storage, heat networks can be used to manage intermittent renewable power generation, and use the financial rewards to lower user's heating bills.
- **Prioritise electricity demand reduction.** DECC has identified more than £9.6 billion in achievable electricity waste savings up to 2030, equivalent to the annual operation of 14 new gas power plants and £11.2 billion in new capital investment. By focussing on electricity saving opportunities, DECC could both lower energy bills and meet climate change commitments more cheaply.
- **Support waste heat recovery.** Waste heat in industry, power stations and computer server farms is low-carbon and can be accessed by energy users through heat networks. Low-carbon industrial waste heat could heat more than 660,000 homes at a lower cost than existing heat policies. The Consumer Value Guarantee could result in the RHI becoming a low-carbon heat incentive and support waste heat recovery.



In the heart of the community of Islington, the council have installed a local energy centre to heat and power 700 homes.

Empower local authorities to meet local energy needs

In a more local, decentralised energy system, local authorities are uniquely well placed to draw together local communities, using tools from planning to social services to economic strategies, to optimise local energy investment.

Infrastructure funding can help local authorities directly tackle energy issues, using local energy resources more efficiently to meet local needs.

Local authorities, including the Core Cities, are already making extensive investments in decentralised energy measures to help fight fuel poverty and rising energy bills, bringing local stakeholders together. By 2016, more than 120 local authorities are expected to consider heat infrastructure investments, in addition to renewable electricity investments.

Policies to strengthen role of local energy

Some options to strengthen local authorities to deliver more affordable, lower carbon energy in their local areas could include:

- **Use an area-based approach for heat and energy efficiency policies.** The best way to meet the heat needs of businesses and householders depends on their location - the right solution for a dense urban area will be different to that for a rural community or industrial centre. By establishing zones based on the characteristics of each location the most cost effective heating solution for each area can be supported rather than an uncoordinated patchwork which is likely to cost consumers more.
- **Strengthen local authority energy skills.** The Heat Networks Delivery Unit (HNDU) expects to provide £7m to 120 local authorities to consider heat infrastructure investments. But local authorities need additional skills, training and support if they will deliver energy savings for local residents. A new Government should resource HNDU to allow it to build the skills necessary for local authorities to deliver high-quality, low-carbon infrastructure.
- **Anchor Allowable Solutions scheme to local areas.** Starting in 2016, housebuilders will pay into an 'Allowable Solutions' fund as part of the zero carbon homes policy. This fund should be used for reducing carbon emissions in local buildings, so communities see the benefit in their area.

- **Enable local energy supply.** Local generation often struggles to operate in a market for large power stations. Many generators would like to be able to supply local users but the current system effectively limits this. For businesses and the public sector, the inability to supply locally without building their own power network can mean the opportunity for local energy is lost. Both the Greater London Authority and Nottingham may become licenced suppliers, but both are facing significant challenges to do so. A new Government should require the regulator to ensure simple local energy supply, including from businesses and local authorities.



“There are no silver bullets which will deliver an affordable, secure and low carbon energy system, but by thinking about the consumer first, we can use a range of options to find the right solutions for the right people in the right place.”

References available at www.chpa.co.uk



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