Sustainable Energy Association
Key policy issues brief

Sustainable Energy Association

The Sustainable Energy Association is a member based industry body offering innovative policy solutions that link up building-level technologies and the wider energy system to achieve a low carbon, secure energy future for the UK, benefits for UK consumers, and commercial growth for businesses working in the sector.

It will be our mission at the Sustainable Energy Association to promote a key message – namely that almost all demand-side solutions cost less during their life time than almost every "big energy" solution.

This paper details the SEA's central campaign as well as our positions with regard to energy efficiency, the generation of heat, the Feed in Tariff and 'Smart' energy systems. All these systems can contribute toward a successful result in any 'long term economic plan' which seeks to make the British economy more productive and competitive.

SUSTAINABLE ENERGY ASSOCIATION

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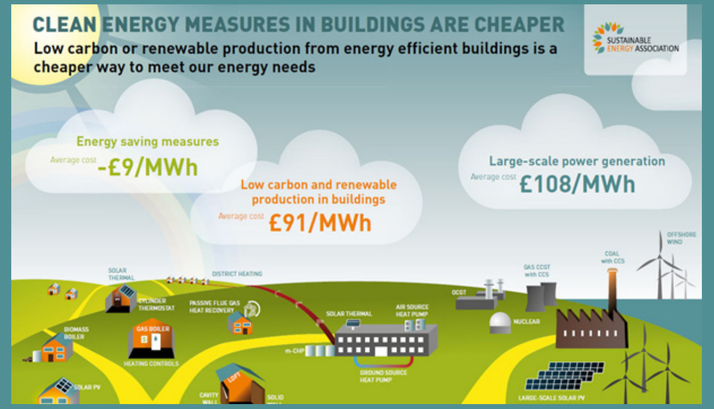


Our big ask

The SEA is calling for a holistic review of UK energy policy with the aim of developing an overarching strategy to deliver cost-effective low carbon energy. The SEA has completed modelling which indicates that building scale energy efficiency and generation technologies are amongst the most effective means of satisfying consumer needs.

The Economic Case

Generating energy from large power stations costs the nation £108/ MWh; generating energy from low carbon and renewable production costs £91/MWH; energy saving measures save the nation £9/MWh (i.e. they have a negative cost)

The Climate Change Case

Energy saving reduces emissions of fossil fuels; energy from buildings is either renewable or low carbon; large scale power generation is responsible for the emissions of fossil fuels, and it is also wasteful as it results in energy being lost in transmission.

The Fuel Poverty Case

Well insulated homes that generate their own energy will also benefit from lower fuel bills and help alleviate fuel poverty.

What is needed to achieve these objectives is an Energy Efficiency and Energy in Buildings White Paper, to be drawn up after public consultation. This would therefore involve independent experts, and would include an assessment of the UK's energy system based on a total systems cost analysis and lead to a strategy for going forward

"Home energy efficiency is the best way to reduce power output and to keep bills down"

– Amber Rudd, appearing before ECC committee, 21st July 2015

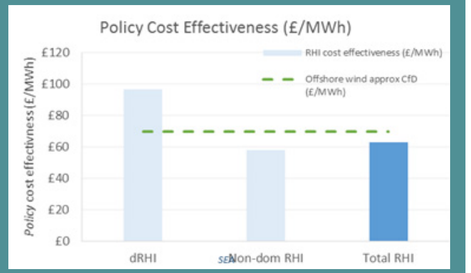
Heat

In its report to Parliament in June 2015 the Committee on Climate Change reported that, "Significant action is required in the new Parliament in order to meet the fourth carbon budget and to stay on track to the 2050 target. The key risk to future progress is the current uncertainty over the long-term policy framework. Many existing policies or associated funding for the transition to a low-carbon economy are due to end by 2020. There is a need for these to be extended as soon as possible."

The Renewable Heat Incentive (RHI) is the main policy instrument to incentivise deployment of renewable heat.

As highlighted by the Climate Change Committee (CCC), the confirmed spending review settlement for the RHI is fixed until 2015/16 and no funding has been allocated post 2015/16. This leaves an industry that requires stability to fulfil its significant potential, facing uncertainty and anxiety.

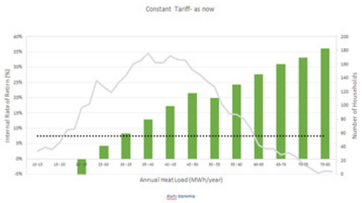
The graph, right, indicates that compared with other Government policies, the RHI is relatively cost effective per MWh energy delivered

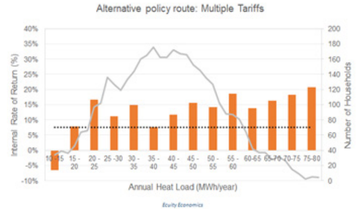


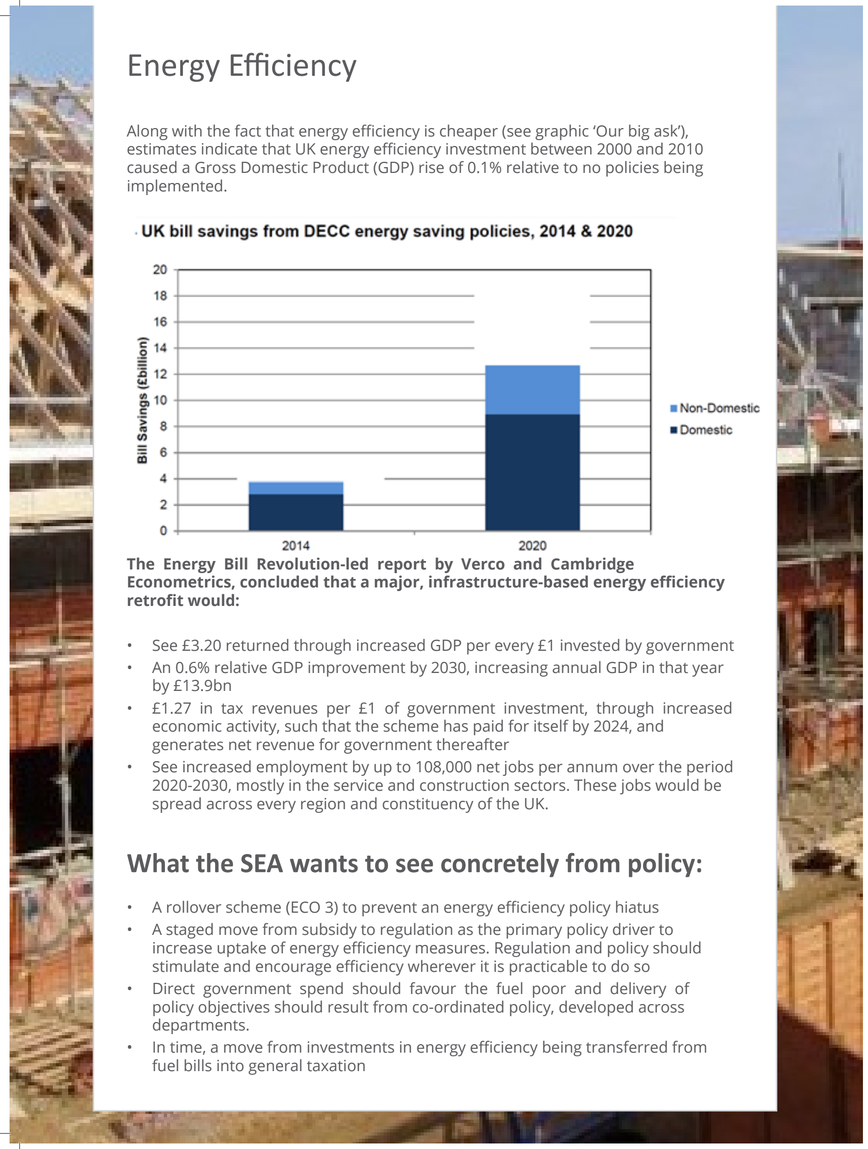
Our recommendations:

- The RHI budget should be sustained beyond April 2016
- RHI tariff design should be reviewed, while maintaining degression, to encourage wider more cost effective deployment in key problem areas
- A strong signal should be provided that future regulatory intervention will take place to move the industry beyond subsidy

There are routes towards delivering the RHI more effectively. The graphs underneath demonstrate how a 'tiered tariff' would deliver a more equitable distribution of heating technologies when measured by heating output.







Energy Efficiency

Along with the fact that energy efficiency is cheaper (see graphic 'Our big ask'), estimates indicate that UK energy efficiency investment between 2000 and 2010 caused a Gross Domestic Product (GDP) rise of 0.1% relative to no policies being implemented.

UK bill savings from DECC energy saving policies, 2014 & 2020

The Energy Bill Revolution-led report by Verco and Cambridge Econometrics, concluded that a major, infrastructure-based energy efficiency retrofit would:

- See £3.20 returned through increased GDP per every £1 invested by government
- An 0.6% relative GDP improvement by 2030, increasing annual GDP in that year by £13.9bn
- £1.27 in tax revenues per £1 of government investment, through increased economic activity, such that the scheme has paid for itself by 2024, and generates net revenue for government thereafter
- See increased employment by up to 108,000 net jobs per annum over the period 2020-2030, mostly in the service and construction sectors. These jobs would be spread across every region and constituency of the UK.

What the SEA wants to see concretely from policy:

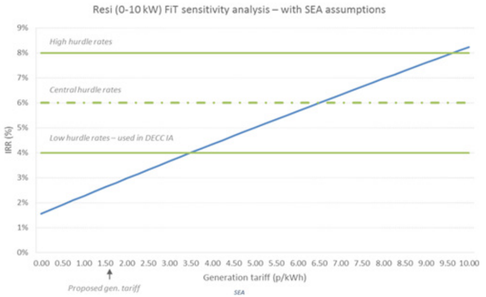
- A rollover scheme (ECO 3) to prevent an energy efficiency policy hiatus
- A staged move from subsidy to regulation as the primary policy driver to increase uptake of energy efficiency measures. Regulation and policy should stimulate and encourage efficiency wherever it is practicable to do so
- Direct government spend should favour the fuel poor and delivery of policy objectives should result from co-ordinated policy, developed across departments.
- In time, a move from investments in energy efficiency being transferred from fuel bills into general taxation

Feed-in Tarrifs

The SEA has played a prominent and important role in the development of the FiT to this day.

Maintaining sufficient support to nurture technologies to independence is crucial.

The Sustainable Energy Association (formerly MPC) has a long association with the development of the Feed-in-Tariff (FiT) as a policy to support low carbon technologies. The example of solar PV clearly demonstrates what can be achieved when a supportive policy framework is implemented and industry and government work together to increase investor confidence, encourage investment, increase sales volumes, reduce costs and establish a robust supply chain. The Government's FiT consultation is proposing significantly reduced generation tariffs based on evidence about costs, technology characteristics, and rates of return new FiT participants might get. In addition a cap on new FiTs expenditure of between £75-100m by 2018/19 is proposed.



SEA acknowledges the Government's policy of reducing spending and the constraints within which the FiT Framework will now operate. However, the continuation of this very successful policy intervention until the end of the decade when Solar PV is expected to reach price parity with fossils fuels[1] should take this clean, green, socially useful technology to a position where it no longer needs FiT support.

It is of note that the Government's proposed tariff will reduce the IRR substantively (above graph). This means that returns on solar PV will not be sufficient to attract investment and maintain growth in the sector.

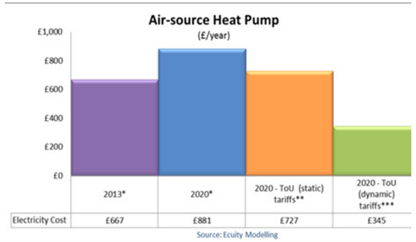
Better reflect value

Other FiT technologies, such as micro combined heat and power (mCHP) have seen far less deployment than solar PV but can also make an important contribution to delivering energy policy including reducing customer bills and reducing carbon with continuation of FiT support. mCHP, which does not have any tariff changes proposed by the FiT consultation, is a technology that provides low carbon heat – offering a competing/alternative technology to those included in the Renewable Heat Incentive Scheme (RHI) - as well as electricity. Since mCHP generates electricity mostly during peak demand periods it has the potential to act as a support mechanism for short term spikes in demand. The FiT consultation seeks options to move to fully metered export and revision of the export tariff so it is more reflective of system costs and benefits. SEA supports the introduction of tariffs that better reflect system costs and benefits. The introduction of Time of Use tariffs would provide a mechanism for technologies like mCHP to be rewarded for the benefits they provide rather than having to rely on subsidy to compensate for the failure of the market reward mechanism.

The mCHP industry has continued to develop its products and improved designs are being launched but the replacement of the cap/review with degression would provide much needed investor confidence and introduce a positive feed-back loop which manages and minimises the required budget for the scheme.

SMART Energy

- The smart meter roll-out should be cost effective and comprehensive
- Greater exposure to price signals can increase the value of demand-movement and demand-side response
- Commercial barriers to domestic aggregators should be removed where possible; otherwise industrial players will be chief beneficiaries of DSR, and domestic households could be faced with higher prices
- Ensure that the commercial framework for DSR is supported by the appropriate regulatory instruments (i.e. requirement for half hourly settlement)
- Innovation should be given a free reign to ensure maximum potential of demand management is achieved
- DSR offers opportunities for cost savings by reducing peak periods of demand. This mitigates the need to invest in expensive grid infrastructure improvements



ASHP	Scenario 1	Scenario 1*	Scenario 2	Scenario 2*
Set up payment	£15	£15	£15	£15
Utilisation Fee – Low	£72		£27	
Utilisation Fee – High		£2,160		£810
Total	£87	£2,175	£42	£825

Scenario 1: DR called on 48 days of the year, 1 hour per day
Scenario 2: DR called on 12 days of the year, 1.5 hours per day

The introduction of Time of Use (ToU) tariffs could encourage smarter uses of ASHPs with smart heat pump controls utilising thermal storage with immersion heaters to run the heat pumps at least cost.

The SEA modelling (see table, graph right) shows that at current prices, the annual electricity bill of a 7.5kW heat pump would be nearly £700. With the introduction of dynamic ToU tariffs, by 2020 this could fall to £345. This added value can reduce the need for subsidy.

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