
An ETI Perspective

Rethinking clean energy policy:
from subsidies to standards





The UK spends about 8% of its national income directly on energy itself (mainly electricity and fuels for heating and transport like natural gas, petrol and diesel). That's more than it spends on the NHS, without counting the cost of other energy-related items like buying and servicing boilers or vehicles.

The country has started to change to new cleaner forms of energy – so far mainly in electricity. But in the decades ahead there is a huge challenge to clean up all forms of energy use, including heating and transport. To do this there is a need to rethink clean energy policy to get the economics right. This means creating market signals to get the right mix of investment and innovation in new technology and business models across the whole energy economy.



There are good reasons why energy bills can be a hot political topic. The sheer size of energy within the UK economy makes it vitally important to our overall prosperity and living standards. The challenge of climate change and decarbonisation means the country has to completely reinvent that whole part of the economy. So success and efficiency in that process of reinvention will be key to future economic success.

Carbon targets apply across the whole economy, and energy use is the dominant source of carbon emissions. So the choices made in one form of energy (e.g. electricity) affect what needs to be done elsewhere (e.g. in heat or transport). In other words the energy economy has become inter-dependent in a new way. But policy thinking has failed to keep to pace. There are long-term economy-wide carbon targets, but energy policies are complex, changeable and fragmented across different sectors.

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THE ISSUES



Focussing on the size and scale of change needed, there are two big issues with the current approach to clean energy policy.

The first big issue is that the energy policy is too complex and changeable to offer consistent long term signals to investors. The UK has created a complex 'spaghetti soup' of policies and subsidies to incentivise investment in new clean energy solutions. And these individual policies all have complex

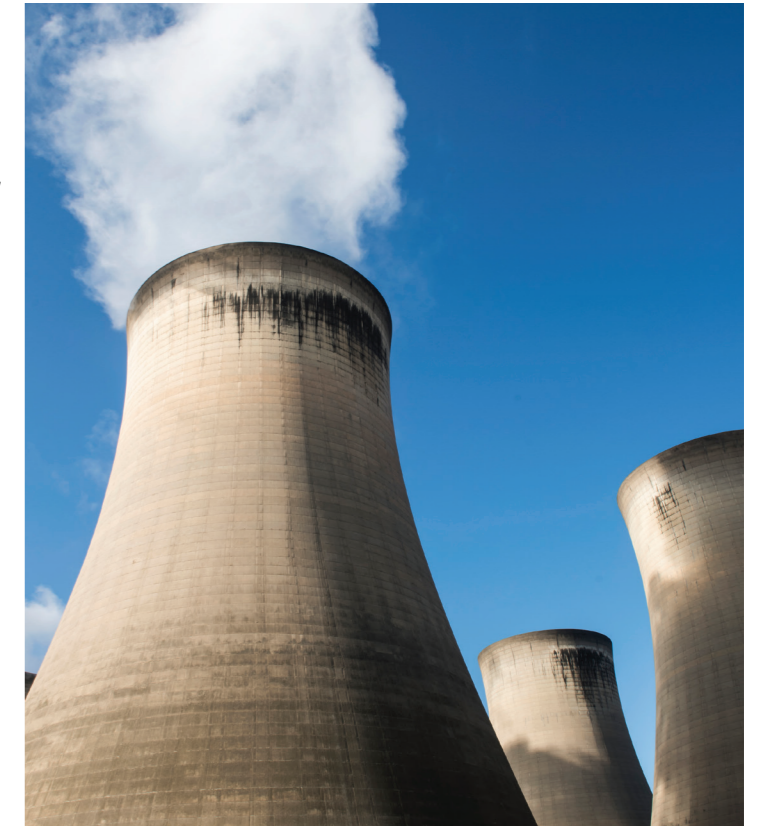
effects on individual markets, often requiring further short term tinkering and reversals. This means that the rewards for investors and innovators depend increasingly on subsidies or guaranteed price contracts from the state. This makes it less attractive to invest in more fundamental long term innovation to build new propositions and value chains that meet energy needs in a low carbon way.



The second big issue is technology neutrality or the problem of creating a level playing field for competition between different clean energy technologies across the whole energy economy. While there has been much talk of the importance of technology neutrality – mainly in thinking about policy in the electricity sector – current policies are actually miles away from creating a set of economic drivers that are genuinely technology neutral across the whole energy system. For example policies have created a raft of taxes and subsidies which mean that the implicit price placed on carbon varies without rhyme or reason across different sectors and end uses.

All of this matters, because it means markets cannot do their work to reveal the best ways to cut emissions across the economy.

So how can policies be reshaped to solve – or at least reduce – these problems?



RETHINKING POLICIES



The UK should rethink clean energy policies, if it wants to create a more consistent and durable set of economic signals that enable markets to drive the best mix of clean energy solutions.

There are two key potential areas for reform.

The first potential area for reform is a move to using standards rather than subsidies to drive lower carbon intensity. This approach could be applied evenly across all the carriers of energy that are the source of the overwhelming majority of emissions. Using standards could give a more reliable, long term signal to drive investment and innovation in low carbon technology across the board. History tells us that capitalism generally tackles the bad it sometimes creates by setting standards - from limiting child labour in Victorian times through to setting pollution standards in recent decades. Standards are used to incentivise markets and innovators to find the best, most efficient way to deliver the goods and services wanted, but in ways that are socially and environmentally acceptable. Standards have potential advantages because experience shows that they tend to be more durable and less changeable than instruments like taxes or subsidies. For example, there is not much debate about how much cheaper cars would be if we still tolerated dirty exhaust fumes. Equally investors in car manufacturers or water utilities do not have to waste much time fretting about the risks to their business of standards being loosened.

In the UK we already have legally defined long term carbon targets through the Climate Change Act. These are currently expressed in a way which binds policy makers, rather than the companies that create carbon emissions. But they could be translated into a set of gradually tightening carbon-intensity standards, so that they directly bind energy market players and investors.



The second potential area for reform is to really tackle technology neutrality, by making emissions reductions tradeable across the whole economy. A system of tradeable carbon credits could be introduced, with credits being used to meet carbon intensity standards regardless of where or how the energy is used (whether as electricity, or as heat or in transport). This would mean the market could play a much bigger role in driving the best combination of emissions reductions across different sectors.

Over the decades to 2050 an energy policy framework that gives much more reliable long term signals and is genuinely technology neutral could yield huge productivity benefits for the UK economy. And it could help reduce the complexity and number of sector-specific policies, enabling the UK to move to a much simpler, more durable framework for clean energy policy.





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 01509 202020

 www.eti.co.uk

 info@eti.co.uk

 @the_ETI
