



Anglesey Against Wind Turbines

Response to DECC Consultation on Cfds and Capacity Market, September 2013

The Price of Electricity and Poverty in Wales

New research by the 'Joseph Rowntree Foundation' provides evidence of poverty in working households in Wales. <http://www.bbc.co.uk/news/uk-wales-politics-24146012>

'Which' has also conducted research into fuel poverty and has presented its findings to the Energy and Climate Change Select Committee. It is clear that Welsh households are suffering higher than average rates of fuel poverty. Electricity is an essential household consumable and the UK Government has a duty to ensure DECC regulations and structures for the financial underpinning of the electricity supply system provide the most cost effective means of delivering an affordable electricity supply to households.

Low wages and high energy prices are driving many Welsh households into poverty. And high energy prices are undermining the competitiveness of businesses and industries in Wales and have contributed to industrial closures, as at Anglesey Aluminium, and continue to threaten businesses and jobs. There is potential for a vicious spiral of decline unless the price of energy can be controlled.

It is very difficult in a globalised world economy for UK businesses to compete with the low wages paid in developing countries, especially when those countries are not constrained by high energy costs resulting from inept decarbonisation policies. Even by comparison with developed countries we are losing the ability to compete. The European president Herman Van Rompuy is reported as saying recently that it is a top EU priority to slash energy costs, "Compared to US competitors, European industry pays today twice as much for electricity, and four times as much for gas. Our companies don't get the rewards for being more efficient". The EU Commissioner for Industry, Antonio Tajani, went even further. "We face a systemic industrial massacre," he is reported to have said, "I am in favour of a green agenda, but we can't be religious about this. We need a new energy policy. We have to stop pretending, because we can't sacrifice Europe's industry for climate goals that are not realistic, and are not being enforced worldwide," he told *The Daily Telegraph*.

So it is unfortunate that the UK Government is choosing this moment in time to continue its pursuit of a policy that will increase the price of electricity.

Having attended an event in Llandudno last week, arranged by the Welsh Government to inform 'stakeholders' about the DECC consultation on the proposed Contracts For Difference (Cfd) and Capacity Market contracts, Anglesey Against Wind Turbines, (www.aawt.org.uk), an unfunded voluntary community group, is concerned that the basis

for both of these proposed types of contracts will leave consumers, particularly household consumers, locked into high electricity prices.

The High Cost of Renewables

The DECC civil servants, presenting the consultation documents from the platform, acknowledged my observation and confirmed that the cost of the guarantee of the so-called 'strike price' in the Cfd, offered to generators of renewable electricity, will be passed on from the Government counterparty body signing the contract and will be met by electricity consumers from their bills. The strike price will give power generators a guaranteed minimum index linked price for the electricity they supply to the Grid throughout the 15 year term of the contract. Within that term the Government is currently committed to a set percentage of electricity generation from renewable sources. Wholesale gas is half the price of onshore wind energy, but it is proposed that contracts for onshore wind at twice the price of gas will be offered. Furthermore in the event that wholesale shale gas and oil prices fall, the market will not be permitted to deliver a higher percentage of electricity from those sources, if it eats into the percentage that has to come from renewables. Therefore the full benefit of that additional cost reduction cannot be passed on to the consumer. Gas is a lower carbon source of power than coal, and carbon capture and storage may become commercially viable within the next 15 years. Nuclear power is a very low-carbon power source. Therefore the commitment to a renewables target is not the only, nor even the best method, of reducing carbon emissions, especially when the additional infrastructure requirements are taken into consideration. However the renewables target looks set to lock us into high electricity prices for the next 15 years. Nor will consumers benefit from innovations within renewable technologies, or from falling prices, such as with solar pv, where prices have fallen dramatically, and the technology is already close to achieving grid price parity. The contracts about to be entered into, which will remain on offer for a number of years, lock in the high guaranteed contractual price for the supply of electricity, at a much higher price than it need be for the consumer. It would seem therefore that the process for offering 'strike prices' is totally removed from any 'market' forces, and is unrelated to improvements in power generation technologies, be they for fossil fuel, renewables or nuclear.

Wind Energy Produces a Flawed, High Cost Capacity Market

The civil servants from DECC also acknowledged my observation that in the past, security of supply was mainly achieved by ensuring that the UK Government/power plant operators had access to sufficient stocks of fuel. However as a result of utilising wind energy in the energy 'mix' there are now several costs, in addition to the cost of fuel and fuel storage, that must be borne in order to ensure a secure supply of electricity. Nowadays, as a result of the unreliability of wind power, capacity market contracts will have to cover the cost of a larger and more dispersed grid network to connect the large number of scattered wind farm developments. There will also be the additional cost of contracts to build back-up conventional power plant, plus further additional costs, by way of premiums, paid for the use of the back-up plant, or indeed for its standing idle. Conventional power plant operators are already demanding compensation for not being able to sell to the grid when wind energy is being generated and accorded priority by the System Operator. Potential conventional power suppliers considering investments and the offer of Capacity Market contracts are already making a comparison with the fact that wind power operators are being paid to shut down, when their output cannot be balanced on the network or is not

required. The logic follows that investors in conventional plant should also be compensated for loss of revenue arising when they are required to shut down or operate inefficiently due to wind generators. It has been reported that contracts for 'back-up' conventional plants may have to offer as much as 12 times the price per MW hour than if such plants were supplying the grid on a continuous, uninterrupted and efficient basis. What is more, if gas, coal or oil plant is required to shut down during periods when it is able to purchase cheap fuel in the marketplace, that is another example of a supply cost reduction that cannot be passed on to the consumer.

Household Consumers Will Pay For Reduced Tariffs For Industry

It is now more clear than ever, that once a Government introduces long term subsidies into an electricity 'market', as with these 2 contract mechanisms outlined in the Energy Bill, suppliers of every type of electricity generation will raise their prices, either by force majeure or choice, to equal the price paid for the most highly subsidised power. In other words, the deliberate skewing of the market is driving prices up, whereas competition in the market would normally drive prices down. At the moment wind power is acknowledged by DECC to be twice the price of wholesale gas and more than twice the price of wholesale coal. Thus the consumer is becoming locked into the very high price offered to this expensive generator of electricity, and cannot hope to get the benefit of price falls due to technological advances or increases in supply of other types of generation. Indeed as the UK Government seeks to reduce electricity prices for energy intensive industries, as it has announced, then there is a real danger that the cost of the 'guaranteed strike price' in the Cfds and also the cost of deals concluded in the Capacity Market contracts, against this background of high price expectations, will end up being transferred from industrial consumers to household consumers. The outlook for household electricity bills over the next 15 years is dismal and like many of the Private Finance Initiative deals entered into by the last Labour UK Government, it will be households, who will shoulder the burden of underwriting the high guaranteed prices.

Wind Power's Inability to Compete Without Subsidy is Skewing the Market

For more than 20 years the UK Government has subsidised wind power. It is now extending that for a further 20 years under the RO subsidy scheme which remains open until 2017 and for 15 years under the Cfds. What's more If wind energy was not subsidised, then the Capacity Market as proposed by DECC would either not be required or would look very different. There would be a normal functioning market, or possibly a nationally owned electricity system, not the model we have here, which is one in which the Government is deliberately distorting prices upwards for consumers.

The writer of the article below has done some research into specific examples of the cost associated with wind energy.

<http://www.telegraph.co.uk/earth/energy/10325749/Consumers-face-bill-for-power-stations-to-be-mothballed-amid-blackout-fears.html>

As you will see, and incidentally as Anglesey Against Wind Turbines has been saying for the past 2 years, old reliable power stations have to be kept, or new reliable back up power stations built, regardless of whether or not we have wind farms. So subsidising wind farms is an unnecessary expense and by doing so, we are in fact paying for 2 parallel electricity systems, i.e. one we can depend on and one we can't. This is clearly economic madness,

especially when people are struggling to pay their household bills. The billions of pounds being spent on wind farms could be spent providing children with a free school lunch every day; fast broadband in rural districts; improvements to transport infrastructure such as Holyhead Port. The total of £7.6 billion, set aside by the Treasury, as the figure that the UK Government has decided can be imposed on electricity consumers between now and 2021, under the Energy Bill's proposed Levy Control Framework for low carbon generation, could even be spent on a new state owned and controlled nuclear power station, such as Wylfa B, and that would provide around two thirds of the electricity for Wales for 40 or more years. That would be value for money, unlike a waste of money for unreliable wind farms. The Consultation documents show the lion's share of the new contracts for renewable energy, and therefore most of the money from the subsidy 'pot', is earmarked for wind energy, this is economic madness.

Subsidies to Other Renewables

There are compelling reasons to support the research and development of nascent renewable technologies, to see if it is possible to bring them to market at a commercially viable scale. And in the case of large scale tidal schemes, given the sheer volume of predictable power that will be generated, subsidy of some of the early full scale generation projects is probably justified. However there is no good reason for continuing to subsidise wind energy. We know it is an unreliable source of energy and so its high relative price, and impact on other costs within the electricity marketplace and network, cannot be justified. Solar energy technology has come down considerably in cost, and though it only delivers power during daylight hours, its intermittent contribution to the network is more predictable. However as solar energy is close to the point where it will not require subsidy, any contracts offered need to reflect that fact. There are also developments occurring in new flexible solar cell and pv materials, which give the technology huge potential within the built environment.

Modelling; Input from the System Operator/National Grid; Political Responsibility

In the past the mistakes and misjudgements that politicians made could often be brushed under the carpet. However in this internet connected age, political blunders are more quickly uncovered and the public is able to see where politicians have gone wrong. A sensible energy policy would turn the economic fortunes of this nation around, and it must be a policy that voters can see will work.

To the average well-informed member of the public, including elected political representatives, the morass of jargon around the modelling of 'strike prices' is reminiscent of the jargon, obfuscations and mind-boggling complex computer models that gave us a dysfunctional and corrupt banking system. I suspect that the Ministers responsible for agreeing these 15 year term contracts comprehend the assumptions and modelling used to arrive at these contractual commitments about as well as certain famous CEOs of international banks and banking institutions understood the CDOs and other deals that their employees on the trading floor were concocting. The fate of household energy consumers now appears comparable to mortgaged home owners in that they are highly reliant and semi-captive consumers with little choice but to provide the networked energy supply companies with a steady stream of cash for an everyday and utterly essential product delivered direct to their home.

However it is not only householders who are vulnerable in this proposed market, the state is also vulnerable. The notion of leaving the cost and security of supply of electricity to the backroom boys in DECC and the privatised, and somewhat falsely reassuringly named 'National' Grid, is about as misguided as relying on mercenaries to provide adequate military defence. The analogy is appropriate as energy security is essential to the UK's security. So the notion that private companies should shape or set the underlying financial basis for the strategic delivery of critical energy supply is incredible. Not least when these companies are vertically integrated throughout the marketplace and have financial interests in the mining and extraction; generation; power plant construction; wholesale fuel commodities market; network supply; retail to the end consumer; smart meter and data collection; distribution networks; household energy efficiency products and services; consumer energy services and maintenance contracts; and indeed all aspects of the energy market, here in the UK and in many cases throughout Europe and the global energy markets. We are in effect embarking on the process of creating 'too big to fail' energy suppliers who could eventually hold to ransom the state and the taxpayer as well as household consumers.

It's obviously an urgent imperative that the energy market is more transparent and that the current costs of different types of energy generation are understood. However what future costs might be is mere speculation and Governments should not involve themselves in such speculative markets. The international energy market will continue to be driven by demand, supply, labour costs, geopolitics and natural resources, currency fluctuations, governmental energy policies and many other unrelated technological innovations and advances. If Government's want security and control of the states critical energy supplies then the state needs to own not only the natural resources but the major power generation stations and the national distribution network. If on the other hand the Government wants to trust to a free and competitive market place, then the fact of the market's competitiveness must be evident or it will be trusted by no-one, and moreover the Government that has created the template and foisted the market onto consumers will no longer be trusted.

What is clear about these proposed Cfd 'strike prices', and also inexplicable from the consumer's point of view is that the strike price offered for onshore wind energy has increased the cost per MW hour above that which was recently agreed for contracts offered under the Renewables Obligation. This is despite the rhetoric, peddled by DECC, that assured the public that by subsidising renewable technologies, the Government is enabling the commercialised delivery of renewable technologies, at prices that will compete with fossil fuel power. So the proposed 'strike prices' in the Cfds for onshore wind are evidently a step backwards on that measure, and furthermore it is clear that by comparison with other energy generation technologies onshore wind provides the consumer with very poor value for money, and on current trends, and despite having been subsidised for over 20 years, there is little or no hope that the cost of onshore wind energy will ever compete with other energy sources. What is the justification for this and why should the consumer accept it?

With such a generous and extraordinary incentive offered to wind energy developers it is hardly surprising that DECC envisages that the majority of renewable energy will come from onshore wind. However the economic and environmental cost to communities affected by unwanted wind farms will be far greater than higher priced electricity. And this will be a further resentment harboured against the energy generators and Governmental perpetrators of such developments.

Anglesey has had 3 large wind farms in the north of the island. They have been operational for around 20 years. A recent door to door petition was signed by around 8,000 people who did not want to see further industrial wind turbine developments situated within 1.5km of homes. AAWT has found that the vast majority of people on Anglesey are concerned about wind turbine developments for primarily one or more of the following reasons:-

- a) wind turbines deter visitors and threaten jobs in the island's vital tourism sector. Tourism employs around 1 in 5 of the island's working population and is the largest private sector employer.
- b) wind turbines produce noise and flicker which is a nuisance and can disturb sleep.
- c) Wind turbines spoil the natural beauty of the landscape and detract from the beauty and settings of historic buildings and monuments.
- d) wind turbines kill bats and birds and destroy wildlife habitats.
- e) wind turbines devalue homes that are close-by and can make them unsaleable.

Climate Change Implications for the Electricity Market

NASA has recently updated its prediction for the current solar cycle, 'solar cycle 24' see link below.

<http://solarscience.msfc.nasa.gov/predict.shtml>

This prediction gives more weight to the scientific studies of sunspot activity over the last 20 years, which indicate that there is a possibility that the Sun is moving into a grand solar minimum like those observed during the Maunder Minimum which coincided with a mini ice age.

The recent decline in sunspot activity is one of the many possible scientific explanations for the pause in the upward trend of the earth's atmospheric temperatures.

The energy policy implications of this additional piece of climate change information are simple to comprehend.

One clear policy response should be that here in the UK where we have committed to a programme of new generation nuclear power we should speed up the delivery of those power stations that are either shovel ready or near to having their reactor designs approved. This is clearly the responsible precautionary policy response as nuclear power stations can deliver a very large and reliable amount of electricity. Moreover there is little need for extra spending on infrastructure. By and large the new nuclear power stations can utilise the existing grid infrastructure. The only additional grid capacity required is to facilitate the extra energy that the new stations are capable of producing. Therefore the new infrastructure could be adjacent to the existing network; added to the existing pylons or better still it can be delivered more efficiently in some cases by subsea routes to the large centres of population (e.g. from Anglesey to South Wales or Deeside). This is clearly the most efficient way to strengthen an existing network rather than embark on a programme of scattered network development that would otherwise be required to facilitate the many scattered smaller scale renewable energy projects. The current network structure, with reinforcement and the addition of a few key sections to facilitate additional capacity is the most efficient in terms of land use; the quickest in terms of design and construction; and will cost less to build and maintain than building a larger dispersed network. It is the most desirable in any scenario and has the added benefit of addressing both potential risks, i.e. a

long term trend towards a warming climate or the possibility of a short term cooling climate.

It also has the advantage of removing the element of uncertainty in the international wholesale energy commodities market, and effectively hands the security and control of UK electricity to the UK state.

*Response prepared by Mairede Thomas on behalf of **Anglesey Against Wind Turbines***

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