Anglesey Against Wind Turbines (AAWT) is responding to DECC's Consultation on a review of the Feed-in Tariffs scheme - Closing Date 23rd October 2015

AAWT is a community campaign group which was set up in 2011 to protect the environment, homes and prosperity of people on Anglesey.
In 2013 the group collected 8000 signatures from island households and petitioned the County Council calling for no developments of commercial wind turbines in the island's AONB and for a 1.5 kilometre separation distance between commercial wind turbines and homes. More information is available on www.aawt.org.uk

The DECC Consultation Question 1 asks "Do you agree or disagree with the proposed generation tariff rates set out above? Please provide reasons to support your answer."

AAWT's Response is:- We **disagree** with the proposed generation tariffs for wind turbine sourced wind energy. A**ll subsidy for wind turbines and wind farms should be abolished**. Our reasons are as follows:-

1. Wind turbines have been installed on wind farms in the north of Anglesey since the mid 1990s. These wind turbines were subsidised from the start. It is recognised that they frequently produce little or no electricity. Over the last few years the output has been monitored and the disappointing generation performance can be confirmed by DECC.

There is currently a planning application to re-power some of the older turbines, which the developers say are coming to the end of their operational life. Clearly there is an incentive for developers to erect new turbines when either RO or FITs subsidy is available. However it is also clear that wind turbines only have around 20 years of operational life and they require subsidy throughout that operational life.

There are other energy generation technologies available that require no subsidy, or only require subsidising in the early years. So it cannot be argued that the best use of public money is to provide continuous subsidy for a renewable energy technology when other technologies, that do not require endless subsidy, are available. Governments should always act to prevent public spending commitments that are of poor value, and given the current levels of Government and private debt in the UK it is imperative to put a stop these expensive FITs.

2. Wind turbine technology has failed to develop in a way that overcomes the inherent problem of intermittency and deliver a reliable or dispatch-able source of power. Consequently this technology does not contribute to a national strategy for energy security. Recent research by Dr. Capell Aris, (Fellow of the Institute of Engineering and Technology - reactor physics specialist at Wylfa, and later employed at Dinorwig and Ffestiniog pumped storage stations) published by The Adam Smith Instutute *"provides a rigorous quantitative assessment of wind variability and intermittency based on nine years of hourly measurements of wind speed on 22 sites across the country".*

The study finds:-

"Although it is claimed that the wind is always blowing somewhere in the UK, the model reveals this 'guaranteed' output is only sufficient to generate something under 2 % of nominal output. The most common power output of this 10 GW model wind fleet is approximately 800 MW. The probability that the wind fleet will produce full output is vanishingly small.
Long gaps in significant wind production occur in all seasons. Each winter of the study shows prolonged spells of low wind generation which will have to be covered by either significant energy storage (equivalent to building at least 15 plants of the size of Dinorwig) or maintaining fossil plant as reserve."

http://www.adamsmith.org/wp-content/uploads/2014/10/Assessment7.pdf

Other research has found that even when considerable sums of public money are spent on interconnectors to transmit electricity across continents and regions there are still times when continental weather patterns mean that low wind conditions can prevail for several days at a time. In such conditions the UK is not able to rely on imported wind energy nor could UK wind turbines produce exportable wind energy. Battery storage is expensive and at present there is no prospect that during the lifetime of wind turbines built today, there will be advances in energy storage technologies that would be sufficient to enable the seasonal storage of energy as necessary to cover winter 'high pressure' weather patterns. It is therefore illogical to continue to subsidise wind turbine developments when they cannot be relied upon to provide electricity during the winter months when demand for electricity is at its highest. It would make more sense to invest in the research and development of technologies that could store and utilise the intermittent and infrequent wind energy produced by those wind turbines that are already built in the UK. This would be a step towards creating a more secure energy supply for the UK.

The Government is beginning to address issues around the EU plans for interconnectors between countries, and the glib assumption that "the wind is always blowing somewhere – so wind energy can be transmitted across Europe to where it is needed".

We refer to the Government Response to the House of Lords Science and Technology Select Committee Inquiry:
The Resilience of the Electricity System.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/440286/50226_Cm9083_Gov_response_to_HoL_report_Accessible.pdf

In respect of interconnection proposals it is stated that *"There is a worrying lack of clarity about what options exist if a number of interconnected countries experience system stress simultaneously"*, as would apply when high pressure weather affects large geographic areas that are reliant on wind energy.

On page 18 it is stated *"There is much debate around the costs of renewables and the costs of maintaining a resilient system that incorporates intermittent renewables. We*

(Department of Energy and Climate Change) recommend that the Government publishes a systematic review of the evidence available on the predicted costs of integration to 2030 and beyond, taking into account a wide range of scenarios. Allied to this, the Government should also disseminate more comprehensive evidence on the potential costs of low carbon generation and improve communication with the public on the costs and benefits. This would help to bring more clarity to the current debate.

DECC has commissioned a project on the Whole System Impacts of Electricity Generation Technologies. This project aims to systematise the government's understanding of the impacts (both costs and benefits) of electricity generation technologies, including intermittent renewables, on the electricity system (e.g. system balancing, overall capacity adequacy, networks). The first phase of the project has delivered a comprehensive framework to define whole system impacts, their components and their drivers. The second phase of the project will further develop DECC's electricity modelling capability to formally deal with the evolution of whole system impacts over time and in different technology mix scenarios."

AAWT welcomes this commissioned project and hopes that it will also consider "whole system impacts of electricity generation technologies" upon those parts of the UK that are economically dependent on tourism and unspoilt landscape value, such as here on Anglesey.

3. UK Government policy has for too long supported wind turbine developments when it is obvious that the very nature of wind turbine generated electricity is unreliable. For every MW of electricity the Government *hopes* a wind turbine will produce we know it is essential to build another type of power generation plant capable of providing an equal number of reliable MWs to that which the wind turbine *might* generate. The construction, operation and maintenance cost of this dependable back-up power supply is added to the cost that consumers have to pay for their electricity. This extra cost is frequently ignored by the proponents of wind turbines when they are comparing the price of electricity from different types of power generation technologies. However these are real costs, borne by consumers, and are part of the reason why electricity from wind turbines is such an expensive option. The Government has a duty to drive down the costs of electricity if it is entering into binding long-term contracts that will commit UK electricity consumers to pay a guaranteed price to developers and power companies. It is self evident that the best way to drive down the cost of electricity is to stop building unreliable power plants that require 100% back-up.

The Centre for Policy Studies published a report earlier this year:-

http://www.cps.org.uk/files/reports/original/150313101309-HowrenewablesubsidiesdestroyedtheUKelectricitymarket1.pdf

It confirms AAWT's analysis that subsidies for one part of the UK energy market inevitably push up prices across the whole market.

"To keep the lights on, everything ends up requiring subsidies, turning what was once a profitable sector into the energy equivalent of the Common Agricultural Policy. Worse still in a highly capital

intensive sector, because prices and therefore revenues are dependent on government interventions, private investors end up having to price and manage political risk, imparting a further upwards twist to costs and prices."

And when subsidies are given to sources of unreliable power not only do developers want to jump on the subsidy bandwagon, there are clearly extra costs to ensure supply.

"Without renewables, the UK market would require 22GW of new capacity to replace old coal and nuclear. With renewables, 50GW is required, i.e. 28GW more to deal with the intermittency problem. Then there are extra grid costs to connect both remote onshore wind farms (£8 billion) and even more costly offshore capacity (£15 billion) – a near trebling of grid costs."

It is time the UK Government dealt with the policy induced distortions in the electricity market. Getting rid of FITs for wind turbines is long overdue.

4. This Government was elected on the basis of a number of manifesto pledges and it has a mandate to fulfil those pledges. It should honour the promises it made in respect of future on-shore wind developments and immediately stop wasting consumers' money on wind turbine subsidy.

5. Developers have been aware of the UK Government's election manifesto for several months. The previous Government also reviewed and amended the FIT subsidy. Ofgem has always made it clear the subsidy was open to review. A report produced by Frontier Economics on behalf of the Department of Energy and Climate Change concluded that Britain's wind energy subsidy was 35% more expensive than the international average. Developers should be aware of the costs imposed on the public and presumably have made an assessment of all the potential risks associated with starting work on any new developments including changes in the market place and Government policy. There is no reason to delay the removal of wind turbine subsidy now, when this is in the best interests of electricity consumers.

6. It would appear that the proposed FIT subsidy for small generation capacity wind turbines offers a guaranteed price for the electricity, which is far more than twice the market price of electricity produced from either gas-fired power stations or the existing nuclear power stations. If this is the case there is no good reason to offer this guarantee and the subsidy should be withdrawn.

In January of this year Conservative MP Nigel Evans introduced the 'Onshore Wind Turbine Subsidies (Abolition) Bill into Parliament. In his introduction he said:-

"I should like to mention single turbines. These are usually applied for and sited on farmland and they operate under a different regime, the feed-in tariff. Farmers are paid to generate even if they use the power themselves, and they are paid a further amount on top of that for any power fed into the grid. For example, the basic tariff on a 50 kW turbine is 17.78p per kWh, which is £177.80 per MWh, and a further £47.70 for power fed into the grid. If a farmer with such a turbine uses 80% of the power himself, which is not unrealistic, the power fed into the grid and therefore paid for by the

consumer will cost a staggering £936.70 per MWh, which is nearly 20 times the wholesale market price. In the case of the owner of a 500 kW farm turbine who uses half the power generated, the price paid by the consumer for the power fed into the grid would be £344.10 per MWh, which is more than six times the wholesale market price. That does not make sense. Those examples show the extent to which the electricity market and, potentially, the farming market are being distorted by this subsidy. A farmer who can get an income of more than £200,000 a year from a turbine has a lesser incentive to improve the competitiveness of his farming activities."

To continue with a subsidy scheme that distorts the competitiveness of both the food and energy markets is not defensible. The cost is born by consumers whether they are other businesses or poor households. There has been considerable pressure on Government to relieve energy intensive industries of these unnecessary costs, most recently in respect of steel producers. But here in Anglesey the aluminium producer has already closed down, citing the high cost of energy, resulting in the loss of more than 1000 direct and indirect jobs on the island. If the Government does reduce the price of power to energy intensive industries the likelihood is that the cost of the guaranteed FIT price offered to owners of wind turbines will simply end up on the bills issued to other consumers.

What is clear is that subsidies to wind turbines are making UK industry less competitive in international markets, leading to the loss of large numbers of UK jobs and handing the bill to households. No Government should allow this situation to continue.

DECC Consultation Question 8 asks "Do you agree or disagree with the proposal to introduce deployment caps under the FITs scheme? Please provide your reasoning."

AAWT's response is:- We agree with the proposal to introduce deployment caps. In the case of wind turbines the deployment cap should be employed now so that only developments that have already obtained planning permission and have the necessary land rights and network connection agreements should be eligible for FIT.

1. We refer to the 6 reasons we have given above in respect of Question 1. There is already a considerable amount of so-called 'generation capacity' in the wind turbine technology sector. It has not proved to be good value for money. The use of this technology has destabilised the network; given rise to a greater threat of black-outs and brown-outs; and added to the insecurity of the UK electricity supply. Due to the need for 100% back-up facilities, deployment of wind turbines has not removed the need to invest in an equivalent amount of other types of reliable power generation.

2. By means of the Levy Control Framework (LCF), the previous government set a limit on the amount of money which electricity consumers would have to pay for subsidised renewable energy.

The LCF is an important measure if future electricity supplies are to be affordable. However the previous Government was negligent in supervising this budget and it appears that the modelling used by the previous DECC Secretary of State and his department was insufficient to deal with the realities of the international energy markets.
This Government has found that the LCF budget has been massively overspent.

It is imperative to stop any further overspend. Should there be further overspends this will have a severe impact on households and on the Government's plans for balancing taxation and benefits in a way that is intended to leave households no worse off.

DECC Consultation Question 20 asks "Do you agree or disagree that recipients of FITs should be required to notify the relevant DNO of new installations as a condition of the scheme?"

AAWT's Response is:- We agree

DECC Consultation Question 21 asks "Do you agree or disagree the FITs scheme should be amended to include requirements that help mitigate and limit the impact on grids such as requiring generation to be co-located with demand or storage?"

AAWT's Response is:- We agree

DECC Consultation Question 22 asks "Do you agree or disagree that the FITs scheme or wider networks regime should be amended to ensure generators pick-up the costs they impose on the network?"

AAWT's Response is:- We agree

1. If this amendment is not made the extra network costs become essentially a disguised form of additional, and often considerable, subsidy. The extra network costs cover both any new installations required to connect the subsidised development to the network and O&M. Consequently this subsidy is a continuing expense for consumers and one that could extend even beyond the useful life of the wind turbines that have been subsidised by FITs.