From:	Keith Blanchard
To:	NDF
Subject:	Draft National Development Framework
Date:	31 October 2019 14:59:42
Attachments:	DraftNDF 301019.pdf

Dear Sirs,

Please find attached PDF of our objection to this proposal.

Yours sincerely

K.Blanchard

[redacted]

[redacted]

NDF Team
Planning Policy Branch
Welsh Government
Cathays Park
Cardiff
CF10 3NQ

31 October 2019

Dear Sir,

Reference: Draft National Development Framework

We are writing in objection to this Draft National Development Framework and ask that you take note of our concerns and comments as follows.

We live in a time of great change and even greater possibility. Demand for clean and sustainable energy is intensifying. Fortunately, innovation is also increasing, creating global opportunities for companies with the vision and technology to succeed in emerging markets.

Unfortunately for those of us here in Mid Wales we are again disenfranchised by this cynical POLITICAL - Draft National Development Framework.

To disenfranchises us at outset is certainly not as page 56 of this document states: ‘Overview - defines Mid Wales, as being of a ... secondary cluster of towns around the Milford Haven waterway and across the regions larger towns which include ...’ a listing so insulting and incomplete to also claim further - ‘A collaborative, holistic approach ... Many of these issues have national, regional and local dimensions and will be delivered through co-ordinated action at all levels. ...’

This is a perversion of our rights here in Wales, as you have deemed under the Wales Act 2016 yourselves as the final arbitrators of any Infrastructure project, you portray this whole document as your public consultation, our voices will not be heard in reality.

The Draft National Framework Development proposal, with its proposed use of outdated and unreliable technology (on-shore wind & solar) to provided for our future sustainable energy needs, certainly is not the real world. It is formulated by those companies with a vested interest in their deployment here in Wales, such as:

https://www.iwa.wales/wp-content/uploads/2019/03/IWA Energy WP6 Digital-2.pdf

This is certainly not on a carbon neutral claim, as their offset against their production, delivery, construction and infrastructure will never be paid back, not only in CO2 emissions but also their impact on the beautiful, heritage landscape here in Mid Wales and a human cost. CO2 calculations have always missed a vital part of the mathematics as demonstrated at:

http://www.windaction.org/posts/7149-a-guide-to-calculating-the-carbon-dioxide-debt-and-payback-time-for-wind-farms#.XbgNsC10dmA

I*t is broadly accepted that wind turbines do not emit CO2 at the point of generation. However, in common with all types of power station, it is emitted during their construction and, through damage directly inflicted on the construction site, over a much longer period. The total debt will vary from site to site but will comprise some or all of the following;*

• Emissions arising from fabrication (steel smelting, forging of turbine columns, the manufacture of blades and the electrical and mechanical components);
• Emissions arising from construction (transportation of components, quarrying, building foundations, access tracks and hard standings, commissioning);
• The indirect loss of CO2 uptake (fixation) by plants originally on the surface of the site but obliterated by construction activity including the destruction of active bog plants on wet sites and deforestation;
• Emissions due to the indirect, long-term liberation of CO2 from carbon stored in peat due to drying and oxidation processes caused by construction of the site.

It is important to recognizes that peat is a major store of carbon accumulated from dead plant remains over many millennia. It is held in perpetuity because the bog's wetness and acid conditions prevent the access of oxygen and inhibit the growth of bacteria which would otherwise rot the vegetation. Draining peat for construction reverses both these long-term processes: the soil is exposed to the air, the carbon is converted to CO2 and released slowly to the atmosphere.

Several papers from the wind industry in Denmark and the UK have addressed the first two points with estimates of payback time ranging from about six to 30 months.

However, the industry rarely, if ever, considers the last two. This is a fundamental omission as their contribution to the overall CO2 debt, in particular the last, can be far greater than all the others put together. This paper outlines a procedure for quantifying it.

The guide has been prepared to enable anyone with access to the Environmental Statement (ES) that forms part of a Planning Application (PA) for a wind farm to estimate its CO2 debt. (If some of the requisite information proves to be unavailable, this ought to provide grounds for postponing consideration of the application and the commissioning of further assessment.)

The results of the calculations described should be submitted to planning authorities or Public Inquiries as part of the arguments used in assessing the merits and demerits of an application.

To help this argument I suggest the following as further information.

https://www.naturalnews.com/039488 wind farms carbon dioxide emissions.html

When the researchers designed the "carbon payback time" equation in 2008, they estimated that a wind farm on peat soil would take 23 years to produce carbon savings, even though the average life of a wind farm is only 25 years.

https://naturalresources.wales/about-us/news-and-events/news/restoring-welsh-peatlands-for-people-and-wildlife/?lang=en

That's the key message from the Wales Peatland Action Group as the Welsh Government's Minister for Natural Resources Carl Sargeant prepares to attend the United Nations Climate Change Conference in Paris, which runs from 30 November to 11 December 2015.

Due to damage over many years, Welsh peat is a source of green-house gas emissions, releasing around 550,000 tonnes of carbon into the atmosphere every year. This is equivalent to approximately the annual CO2 emissions of Anglesey or Torfaen.That's why the Welsh Government has set an ambitious target of getting all peatlands in Wales into restoration management by 2020.

The Welsh Government's target for peat restoration covers around three quarters of Wales's total peat area. If fully restored, emissions would be reduced by around 168,000 tonnes every year.

Peter Jones, NRW member of the multi-agency Welsh Peatlands Action Group said:

"Restoring peatlands is essential. If all carbon in peatlands was to be lost to the atmosphere it would be equivalent to almost 15 years' worth of Wales's total CO2 emissions   or 97 years' worth of CO2 emissions from Welsh agriculture and **land use***."*

https://www.arup.com/projects/wind-farms-in-wales

In Wales, peat bogs have presented particular problems for developers, both in reducing the ecological and geological impact of construction and in designing tracks that will lessen the impact where such areas have to be crossed.

It is also at varient with the Welsh Goverment publication:
Prosperity for All: A Low Carbon Wales

The Environment (Wales) Act 2016 set a target of reducing GHG by at least 80% from their pre-1990 levels by 2050. The Act also establishes a rigorous and comprehensive statutory process in establishing the level of the interim emissions targets for 2020, 2030 and 2040 and carbon budgets.

Infrastructure
Our low carbon pathway requires us to decarbonise across a number of sectors such as power, buildings, transport and wider areas. This means we need to ensure that long-lived infrastructure for these sectors support low carbon options and avoid locking-in high-carbon infrastructure and behaviours.

Again the core of Mid Wales loses out and is singled out for no development other than the possibliteies of providing a wind farm or a solar landscape. We are left with knowing that we do not exist as far as this government is concerned, rather they now lump us together with Swansea Bay and we are playing a secondary role in any further development infrastructure.

There is no appetite for such developments here from the main infrastructure developers either. The UK government has withdrawn subisdies for on-shore wind developments and solar farms as this is now regarded as old technology.

National Grid have shelved any Mid Wales grid connection and have not included any such connection in its forward planning routes.

New forward thinking technologies are required to meet this government's targets.

Technologies such as nuclear fusion which is just around the corner (it is actually working in the USA and France), tidal, energy technologies/sources (hydropower, new solar power, marine-energy, geothermal energy, heat pumps, biomass and biofuels) are alternatives to fossil fuels contributing to the improvement of environment, enhancement of energy security and diversification of energy supply.

Below are technologies related to energy production, areas of accelerating change which have not been fully taken into account in the Draft National Development Framework:

Storage, Smart grid and Electricity generation.
Energy storage involves new, cost-effective ways of storing energy, either in improved batteries, as new fuels or other ways. A smart grid is a set of technologies that pairs information with moving electricity around, enabling more efficient generation and use of energy. Electricity generation is characterized by technologies that generate power from unused sources and that more efficiently produce electric power or fuels from sources in use today.

Electricity Generation
Tidal turbines: A form of hydropower that converts tidal energy into electricity. Currently used in small scale, with the potential for great expansion.
Scientifically viable in 2015; mainstream and financially viable in 2017.

Micro stirling engines:
Micrometer sized power generators that transform energy into compression and expansion strokes. Could hypothetically be 3D-printed on the fly and cover entire heat-generating surfaces in order to generate power.
Scientifically viable in 2020; mainstream in 2026; and financially viable in 2027.

Solar panel positioning robots:
Small-scale robots able to re-position solar panels depending on weather conditions. More efficient than attaching each panel to motorized tracking assemblies.
Scientifically viable in 2014; mainstream in 2016; and financially viable in 2017.

Second-generation biofuels:
New biofuel technologies, such as cellulosic ethanol and biodiesel from microalgae, promise to produce conventional fuel-compatible energy at low or zero greenhouse gas emissions. Scientifically viable in 2016; mainstream in 2017; and financially viable in 2021.

Photovoltaic transparent glass:
Glass with integrated solar cells which converts IR and some visible light into electricity. This means that the power for an entire building can be supplemented using the roof and façade areas. Scientifically viable in 2017; mainstream in 2020; and financially viable in 2021.

Third-generation biofuels:
Moving beyond today's organisms, 3rd generation biofuels involve genetic modification of organisms to produce new fuels by unconventional means. Examples include direct production of hydrogen from highly efficient algae, and production of energy-dense furans for automotive use. Scientifically viable in 2022; mainstream in 2024; and financially viable in 2025.

Space-based solar power:
Collecting solar power in space, beamed back as microwaves to the surface. A projected benefit of such a system is much higher collection rates than what is possible on earth. In space, transmission of solar energy is unaffected by the filtering effects of atmospheric gasses. Scientifically viable in 2025; mainstream in 2027; and financially viable in 2028+.

Micro-nuclear reactors:
A small, sealed version of a nuclear reactor (approximately a few tens of meters in length) capable of being shipped or flown to a site. Currently able to provide 10 MW of power, plans are for 50 MW capacity in the near future.
Scientifically viable in 2022; mainstream and financially viable in 2023.

Inertial confinement fusion (break-even):
An approach to fusion that relies on the inertia of the fuel mass to provide confinement. To achieve conditions under which inertial confinement is sufficient for efficient thermonuclear burn, a capsule (generally a spherical shell) containing thermonuclear fuel is compressed in an implosion process to conditions of high density and temperature.
Scientifically viable in 2013; mainstream and financially viable in 2021.

Thorium Reactor:
Thorium can be used as fuel in a nuclear reactor, allowing it to be used to produce nuclear fuel in a breeder reactor. Some benefits are that thorium produces 10 to 10,000 times less long-lived radioactive waste and comes out of the ground as a 100% pure, usable isotope, which does not require enrichment.

More importantly and, unfortunately for us who live and work in these environs, our challenges to the supposed 'collaborative, holistic approach' is that we have to rely on the courts to pursue any challenge against the current Labour maintained government of Wales on large developments as proposed that destroy habitats and lives.

Yours sincerley

K&T Blanchard