

**WELSH AFFAIRS COMMITTEE**  
**INQUIRY: RENEWABLE ENERGY IN WALES**  
Response to Call For Evidence

*Joint response*

**Our position**

The older generations of the “first world” have for their entire lives benefited from fossil fuels. Now, for the sake of the younger and future generations of the whole world, we all of us must do our utmost to mitigate the terrible climate emergency legacy already impacting in many areas. In the context of this inquiry, this reality requires accelerated political commitment with urgent action to drive the genuine and effective decarbonisation of energy generation in Wales – not just for use in Wales, but also for bulk export.

To this end, the aspiration of “net zero” for our country is gravely insufficient, because it cannot be achieved fast enough to keep within the global limits imposed by a safe carbon budget – that is, the fundamental limit that must be imposed on all human activity.

For humankind to have any chance of staying within our very limited remaining carbon budget, we need all effective and efficient renewable generation technologies to be brought up to scale and rolled out as rapidly as possible right across Wales, and in Welsh near-shore and offshore waters. Further, in recognising that all technologies have a carbon cost for manufacture and deployment, only those technologies with fast payback of energy investment should be accommodated: this requirement automatically disbars fossil-fuelled energy generation, nuclear power, and hydrogen production based on fossil fuels.

**Committee Question 1: How can the UK government best support the deployment of renewable generators in Wales?**

**Our answer 1A: Take the UK electricity network out of private ownership / control.**

From National Grid transmission, through regional and local distribution, down to consumer connections. The infrastructure need not be nationalised: operation could be not-for-profit (q.v. Welsh Water).

This is necessary because the present monopoly District Network Operator in Wales, Western Power Distribution (WPD), has a legal constitution prioritising short term shareholder profit over provision of service. WPD, by either refusing to invest for the long term or demanding that private individuals or businesses fund system upgrades at unfeasible cost, has for years been the binding brake holding back the development of distributed generation, nearly all of it renewable energy: so many promising schemes have been abandoned.

OFGEM (press release, 25<sup>th</sup> Jan 2021) have already called for “re-purposing” of the National Grid so that it is henceforth operated for the common good; we have written to Jonathan Brearley, Chief Executive of OFGEM (our letter to him dated 2<sup>nd</sup> February appended to this document), calling for OFGEM to demand the same for all DNOs.

## **Our answer 1B: Unbundle the South Wales Industrial Cluster and Hynet NW major infrastructure schemes, and press ahead with green hydrogen<sup>1</sup>**

This would have to be a UK Government action. This is because both the South Wales Industrial Cluster (SWIC) and Hynet NW (HNW) are partnerships of Developments of National Significance (DNS) energy infrastructure projects; and DNS decisions are made in Whitehall, not Cardiff.

This step is necessary because Wales needs a large scale green hydrogen production, storage, and transmission infrastructure to fulfil its renewable energy potential. However, as long as the proposed green hydrogen projects within SWIC and HNW are bundled with blue hydrogen<sup>1</sup> and Carbon Capture & Storage (CCS) – both highly contentious in environmental and safety terms – green hydrogen risks being stalled by legitimate challenges to blue hydrogen and CCS.

N.B. There is a very strong Future Generations argument in favour of large scale green hydrogen, because it offers the scale of energy storage needed to balance the natural variability of renewable sources with both day-to-day and seasonal demand patterns. Meanwhile, from a Future Generations viewpoint there are many problems with blue hydrogen and CCS technologies – in particular the necessary huge increase in natural gas imports plus the unproven techniques for handling, transporting, and burying underground absolutely enormous quantities of carbon dioxide – a highly toxic heavier-than-air gas, lethal to all higher lifeforms.

## **Our answer 1C: Introduce a British Renewables Credit Scheme**

Today Wales depends highly on imported oil, gas, and fossil-fuel-derived electricity; this causes an enormous annual Balance of Payments deficit.

Environment aside, other arguments for renewables are that ending energy imports would greatly improve our Balance of Payments, and our strategic position too: energy generated within our territory is not threatened by international political relationships.

However, should the UK government auction off Welsh renewable energy permits to non-UK or multinational businesses, this would mean Welsh residents having to buy their electricity (and subsequently their hydrogen fuel) from wind and solar farms built on Welsh soil but owned by non-domestic, e.g. French, German, American, or even Chinese companies – loyal to global shareholders if not to foreign states.

This outcome would be less likely with a British Renewables Credit Scheme. Whilst this would not prevent foreign companies from developing renewable energy projects in Britain, it would only offer tax concessions or other similar benefits to renewable energy developments exceeding threshold levels of:

- local design, etc, input throughout development
- inward investment during construction
- local and national revenue share during operation.

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<sup>1</sup> *There are definitions and comparisons of hydrogen production methods at the end of this letter*

## **Committee Question 2: How should the UK and Welsh Governments work together to support the development of renewable energy projects in Wales?**

**Our answer:** By completely rethinking development control (i.e. planning) and policies.

The overwhelming scientific opinion is that only if humankind steeply reduces carbon emissions as soon as possible will global temperature rise, sea level rise and ocean acidification stay manageable; thus, for the sake of the young of the world and not just of Wales, we are morally obliged to exploit all our renewable resources – way beyond meeting our own energy requirements.

This does not require any financial sacrifices: in *Electricity Generation costs 2020* BEIS confirm levelised costs of power as follows –

- onshore wind £46/MWh;
- large-scale PV £44/MWh;
- offshore wind £57/MWh.

All are far cheaper than Combined Cycle Gas Turbine generators, with or without Carbon Capture & Storage (both £85/MWh).

Thus, Climate Emergency considerations aside, onshore wind and solar farms offer Welsh homes and businesses the cheapest possible electricity – and, therefore, the cheapest energy sources for future green hydrogen production. Furthermore, public opinion highly favours onshore wind (BEIS Public Attitudes Tracker May 2019: 79% of people support it).

Planners have, to date, ruled out wind and solar power in many Welsh areas because of special landscape qualities; but it now has to be understood that without massive expansion of wind and solar throughout the developed world, including Wales, climate instability will destroy special landscape qualities – with low coastal landscapes and many Welsh villages, towns, cities, roads, and railways devastated by storms and inundated by sea surges.

Renewable energy planning relaxation is, in any case, an economical necessity. Because of the COVID recession, Britain's departure from the European Union, and the major economic upheaval resulting from new trade agreements, farmers, businesses, local authorities, community groups, social venture organisations, families, and individuals all need to diversify and seek new sources of revenue. We therefore need new planning policies and decisions which fit the need: these will let people earn sustainable and ethical incomes, by exporting energy produced from Wales's cornucopia of renewable generation potential.

This must be facilitated by clear Welsh Government leadership. For all domestic/commercial/industrial/grid-connected agricultural properties, we propose these planning permission / building controls revisions:

1. Greatly increase capacity limits of permitted development for renewables.
2. Properties being re-roofed must by law have solar PV fitted to east/south/west facing roofs.
3. Refurbishments or extensions must by law include fitting solar PV to E/S/W facing roofs.
4. New build properties must by law incorporate
  - solar PV on E/S/W facing roofs
  - a power supply capable of supporting heat pump heating plus electric car charging.

### **Committee Question 3: What mechanisms can ensure that subsidies for renewable generators are good value for money?**

**Our answer:** We are deeply concerned that this could be construed as a leading question based on a false premise. It might either suggest a bias against renewable energy, unfamiliarity with the electricity market, or a poor knowledge of subsidies for fossil fuels and nuclear power. As this question risks misleading both the Committee's membership and consultees, it is unfortunate that consultation questions were not independently checked prior to issuing.

The UK's cheapest power is already produced by mainstream renewable techniques, all considerably cheaper than fossil-fuelled generation and nuclear power (see costs summarised above in answer 2 and in more detail at Our World in Data, <https://ourworldindata.org/cheap-renewables-growth>).

The global economy has always subsidised the hydrocarbon industries<sup>2</sup>; after some declines in the last decade, they have recently increased again<sup>3</sup>.

As for Britain, "The UK stands out as a major industrialised economy that, despite the G20 pledge, has expanded the scope of its national subsidies for oil and gas exploration dramatically"<sup>4</sup>; and a 2020 EC report identified £10.5bn a year in support for fossil fuels in the UK, compared with £9.46bn spent on renewable energy<sup>5</sup>.

Only in December 2020 did the Prime Minister announce an end to the UK Government's direct support for the fossil fuel energy sector overseas, which had totalled £21 billion in UK oil and gas subsidies in the preceding four years<sup>6</sup>. Whilst this is a welcome pledge, it must be enacted swiftly to remove outdated legacy financing for fossil fuel extraction, whose value should be redeployed to those sectors of the renewables industries that most need them.

In contrast to fossil fuels subsidies, subsidies for development and deployment of renewable power generation have been manifestly demonstrated as highly effective, with rapid cost reductions as technologies have quickly become mainstream – and remarkable expansion rates now being reported (see Our World in Data q.v).

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<sup>2</sup> "For every \$1 spent to support renewable energy, another \$6 are spent on fossil fuel subsidy and only 8 per cent of the money spent on fossil-fuel consumption subsidies reaches the poorest 20 per cent." IEA, [World Energy Outlook 2015](#)

<sup>3</sup> "The new data for 2018 show a one-third increase in the estimated value of these subsidies, to more than \$400 billion. The estimates for oil, gas and fossil-fuelled electricity have all increased significantly, reflecting the higher price for fuels (which, in the presence of an artificially low end-user price, increases the estimated value of the subsidy). **The continued prevalence of these subsidies – more than double the estimated subsidies to renewables – greatly complicates the task of achieving an early peak in global emissions.**" <https://www.iea.org/commentaries/fossil-fuel-consumption-subsidies-bounced-back-strongly-in-2018>

"OECD analysis of budgetary transfers, tax breaks and spending programmes linked to the production and use of coal, oil, gas and other petroleum products in 44 OECD and G20 economies showed that **total fossil fuel support rose by 10% to USD 178 billion in 2019**, ending a five-year downward trend. .... In 2019, oil and gas industries in several countries received additional benefit, mostly through direct budgetary support to alleviate corporate debt, fossil-fuel infrastructure investments, and tax provisions that provide preferential treatment on capital expenditures for fossil-fuel production. **This represents a rise in overall support for the production of fossil fuels of 38%**" <https://www.oecd.org/fossil-fuels/>

<sup>4</sup> <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9245.pdf>

<sup>5</sup> Energy prices and costs in Europe, EC 2020 ([https://ec.europa.eu/energy/data-analysis/energy-prices-and-costs\\_en](https://ec.europa.eu/energy/data-analysis/energy-prices-and-costs_en)); <https://www.theguardian.com/environment/2019/jan/23/uk-has-biggest-fossil-fuel-subsidies-in-the-eu-finds-commission>

<sup>6</sup> <https://www.gov.uk/government/news/pm-announces-the-uk-will-end-support-for-fossil-fuel-sector-overseas>

**Committee Question 4: What opportunities are there for renewable generators in Wales of greater interconnection with other electricity markets?**

**Our answer:** British and Welsh **energy** (as distinct from electricity only) policies need to take us further than this question suggests; a better question would be “What opportunities are there for renewable generators in Wales of greater interconnection with the broader **energy** market?”

**Our answer to this question:** With Westminster support, the Welsh Government must champion a drive to establish and then continually expand a green hydrogen production, storage, and transmission infrastructure. In combination, the Welsh onshore, close inshore, and further offshore wind generation resources are enormous: the only way to handle such a cornucopia of clean energy and bank it against future demand is by converting it to green hydrogen – and, N.B., green hydrogen is the only type of hydrogen fuel which is truly and permanently sustainable.

**Committee Question 5: How can the UK government facilitate Welsh contributions to COP 26?**

**Our answer:** By setting a target for Welsh renewable energy production going way beyond net zero carbon for Wales. Only thus can Wales act ethically: as there is an obvious humanitarian obligation to serve the best interests of future generations wherever they live, we must aim for maximum possible renewable energy production, way in excess of Wales’ own requirements.

In any case, generating excess wind power from Welsh onshore and offshore resources and exporting it to England (or further afield as hydrogen fuel) would bring enormous economic benefits – given the right ownership & revenue-sharing model (see our answer 1C).

Clearly, a prerequisite is for Wales to have its own Carbon Budget; this, in turn, depends on comprehensive Welsh Energy Budget figures being henceforth reported in DUKES (*The Digest of United Kingdom Energy Statistics*).

**Committee Question 6: What implications is COP 26 expected to have for Wales ?**

**Our answer:** There must be immediate acceptance that the world as a whole can only achieve net zero carbon if those who can act, do act. In other words, planning policies and political mindsets must swiftly bring about a massive expansion of onshore as well as offshore Welsh renewable energy generation – producing all the green energy we can, in ways benefiting everyone in Wales.

**Committee Question 7: Has the COP 26 Year of Climate Action had any significant implications for Wales?**

**Our answer:** Unfortunately COVID 19 has so dominated politics and the media, there has been next to no discussion of the Climate Emergency – and little achieved, in relation to the scale of the problem.

## **Committee Question 8: What opportunities are there for renewable energy to aid Wales post-COVID-19 economic recovery?**

**Our answer:** There are enormous opportunities, if we take the right steps.

*Immediately remove restrictions on renewable energy development.*

Denmark can show Wales the way. This highly successful sovereign state with only double Wales' population is far further down the carbon reduction road, and has enormous renewable energy industries.

Meanwhile, Welsh local authorities can follow Greater Manchester, Cornwall, and Stroud District: all are targeting at least net zero carbon not just for the local authorities themselves, but for all human activities in their administrative areas.

*Operate electricity networks for the common good*

It is no use a renewable energy project being granted planning permission if the prospective developer then confronts barriers, bureaucratic and financial, constructed by a District Network Operator protective of its own narrow interests, particularly where those interests belong to non-UK shareholders.

*Ensure Wales has stakes in, and shares the benefits from, renewable energy projects*

Whenever the UK government allows a non-UK operator to bid for and operate Welsh onshore and offshore large-scale renewable energy projects, the following must be guaranteed:

- a revenue share for Wales
- local communities having design input into, and financial benefit from, such developments
- commitments regarding Welsh economic content
- Welsh located engineering operations.

Further to the last two points: unless Wales acts quickly, the world's largest floating offshore wind farms proposed for the Western Approaches sector between Wales, the Scillies, and Ireland will use turbines and infrastructure constructed at Aberdeen or on the Clyde, if not further afield. Pembrokeshire was quite bluntly warned about this at the *Floating Wind in the Celtic Sea - Future Supply Chain Opportunities* event in Milford Haven, 30<sup>th</sup> Jan 2020.

*Christopher Jessop Independent Energy Consultant Marloes Pembrokeshire*

*Blaise Bullimore Consultant Marine Biologist Tiers Cross Pembrokeshire*

*Charles Mason Planning Consultant Hermon Pembrokeshire*

### **\* NOTE re types of hydrogen fuel:**

Green hydrogen: a clean fuel produced using only renewable energy

Grey hydrogen: a high-carbon-penalty fuel derived from natural gas

Blue hydrogen: identical to Grey Hydrogen, but the carbon dioxide emitted during its production is captured for underground storage

Email sent jointly by us 2<sup>nd</sup> February 2021 to Jonathan Brearley, Chief Executive, OFGEM

## Follow-up to OFGEM proposals re National Grid

Dear Mr Brearley

We wholeheartedly support OFGEM's proposal (press release 25<sup>th</sup> January\* and your BBC Radio 4 Today Programme interview on the same day), that National Grid should be replaced by an independent electricity transmission system operator.

The future direction of Britain's nationwide power transmission system should indeed be planned in consideration of the best long-term business and environmental interests of the nation as a whole, and not for short-term benefit of shareholders – especially ones who are investment-shy. Therefore, whatever body replaces National Grid must be constituted to prioritise long term Common Good aims.

We urge OFGEM to take matters further, and call for the same “re-purposing” of Distribution Network Operators (DNOs). Here in Wales, we all too regularly hear complaints that our local DNO, Western Power Distribution:

- demands exorbitant charges for connecting a wind turbine or a solar array, even at only farm scale;
- alternatively point blank refuses to allow a connection on any terms;
- refuses to even open a dialogue when individual householders apply for supply reinforcement so they can convert from oil heating to heat pumps, or developers wish to equip new housing schemes with heat pumps;
- declares large areas of their region “closed to extra generation” on the grounds that their legal constitution, which prioritises the interests of shareholders over provision of service, absolutely prevents their investment in network reinforcement – even though they quite often admit that those parts of the network are already being run at above design capacity, which can hardly be described as sound practice.

After Brexit, and hopefully very soon post Covid, and considering the inevitable international trade concessions which we know are in the pipeline, farmers and landowners (including local authorities) and all manner of other businesses and community groups are going to need to diversify in every possible way in order to survive. West Wales in particular has superb wind and solar energy resources, but without the fast replacement of our DNO by a Common Good regional network operator, the revenue earning potential and inward investment opportunities will be denied to the people of Wales by an American Board of Directors.

We know that businesses, industries, communities, and individuals in other areas of the United Kingdom are also finding their aspirations for expanding renewable electricity generation frustrated by their respective DNOs in the same way. Therefore we urge OFGEM to issue a follow-up recommendation to the 25<sup>th</sup> January statement, calling for all regional electricity distribution networks to be henceforth managed for the common good.

Christopher Jessop, Blaise Bullimore, Charles Mason

\* *“Ofgem recommends an independent body to help lead Britain's green transformation”*: OFGEM press release, 25<sup>th</sup> January 2021

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