



SAFE ENERGY E-JOURNAL No.79

September 2018

The content of this e-journal was for the most part originally prepared for Nuclear Free Local Authorities and is reproduced, as adapted, with their permission but without liability for its contents.

This briefing does not necessarily deal with the UK Government's proposed new reactor programme. For an update on developments to do with new reactors see here:

<http://www.no2nuclearpower.org.uk/wp/wp-content/uploads/2018/09/NuClearNewsNo111.pdf>

1 Scottish Climate Change Bill

Scotland must “rapidly” shut down its North Sea oil and gas industry to cut pollution and combat climate change, according to a report from the Tyndall Centre for Climate Change Research at the University of Manchester and Uppsala University in Sweden. Carbon emissions from petrochemical plants, oil terminals, cement works and other major polluters will have to cease if Scotland is to play its part in reducing the risk of heatwaves, droughts, storms and floods caused by global warming, they warn. They also call on the Scottish Government to “decarbonise” transport and heating, boost energy efficiency in buildings, cut waste, expand forests by a third and restore peat bogs. (1)

The Scottish Government's draft climate change bill will not be effective enough for Scotland to meet its obligations under the 2016 Paris Agreement, according to the analysis.

The Scottish Government's new bill, set to be debated at Holyrood this autumn, proposes a 90% reduction of all greenhouse gas emissions by 2050 compared to 1990. Their advisers, the UK Committee on Climate Change, claim this target “*is at the limits of feasibility*”. However, the new report - “*Quantifying the implications of the Paris Agreement: What role for Scotland?*” - shows that we must aim for 102% reductions by 2050 in order to play the agreed role in keeping global temperature rises below 2 degrees Celsius. (2)

The scientists calculated Scotland's share of the “global carbon budget” at only 300 million tonnes of carbon dioxide, which Scotland would “exceed in under 10 years at current CO₂ levels. The report advises a “rapid” shift from oil and gas to renewables and for carbon dioxide mitigations to be increased by “at least 10 per cent each year” from 2018.

“This report clearly shows that a 90 per cent target for 2050 is well short of what the Paris Agreement requires of Scotland,” said Richard Dixon, director of Friends of the Earth Scotland (FoES), which commissioned the report alongside umbrella group, Stop Climate Chaos Scotland (SCCS). (3)

Scotland has made good progress in the last decade, mostly through the transition of the electricity sector from fossil fuels to renewables. Scotland's emissions in 2016 were 49% lower than 1990 levels. The Scottish Government's draft Climate Bill proposes a 66% reduction by 2030 and a 90%

reduction by 2050. Stop Climate Chaos Scotland has called for a target of net-zero emissions by 2050 at the latest and a target of a 77% reduction by 2030, as well as the necessary strong policies to deliver on these targets.

The Scottish Labour Party recently backed these tougher targets and the Scottish Green Party back tougher targets still. Labour's climate change spokeswoman Claudia Beamish said the draft bill is "*far too timid*". (4)

The report makes a number of suggestions about how emissions reductions might be achieved. These include reforestation and using more wood in the construction industry to lock away carbon; eliminate all industrial process CO₂ emissions before 2050 (e.g. from cement making); and phase out the oil and gas industry while ensuring a just transition for workers in the sector. (5)

The report states clearly, perhaps for the first time, that the Scottish Government needs urgently to enact policies to rapidly cease hydrocarbon production from its oil and gas sector. This conclusion remains valid even when considering the prospect of carbon capture and storage (CCS). First, the limitations on deployment rates of this still fledgling technology (when applied to power stations) mean that it can have no significant role to play in the 2°C timeframe for full decarbonisation required of industrialised nations. Second, whilst the 'capture' element of CCS may yet be significantly improved, the high levels of emissions associated with upstream fossil fuel production put the life-cycle emissions of CCS at 100-200gCO₂/kWh far beyond what would be necessary for it to have any major role in power generation.

IPCC

FoE Scotland says the Intergovernmental Panel on Climate Change (IPCC) is due to publish its 'Special Report on Global Warming of 1.5°C' in October. The report is expected to show there is a very small carbon budget left to limit warming to 1.5°C and to keep 'well below 2°C', and that all countries must urgently commit to more rapid and far-reaching action. Scotland is no exception. On the contrary, with access to abundant natural and renewable energy resources, Scotland is particularly well placed to deliver its fair share of global action on climate change.

FoE says the 2030 target is the most important target in the Climate Change Bill. Setting a strong target for 2030 is key to driving early emissions reductions and setting Scotland on a pathway towards net-zero emissions, while keeping within a fair and safe Scottish emissions budget. In 2016, annual emissions reductions targets were set for the years 2028-32 under the current (2009) Climate Change Act. The 2032 target was set at 26MtCO₂e, a 65.7% reduction on the 1990 baseline. The new Climate Change Bill sets the 2030 target at only 66%; a negligible increase in effort over the next decade compared to the targets set under the current Act. This is clearly not an adequate response to the Paris Agreement. (6)

1. Herald 26th Aug 2018 <http://www.heraldscotland.com/news/16599722.experts-call-for-north-sea-oil-closure-to-cut-climate-pollution/>

2. Quantifying the implications of the Paris Agreement: What role for Scotland?
<http://www.stopclimatechaos.org/sites/www.stopclimatechaos.org/files/TyndallReport.pdf>
3. Scotsman 1st Sept 2018 <https://www.scotsman.com/news/politics/holyrood-s-draft-climate-change-bill-in-hot-water-1-47935>
4. Business Green 13th August 2018 <https://www.businessgreen.com/bg/news-analysis/3060990/scotland-labour-backs-net-zero-emissions-target-by-2050-at-the-latest>
5. Stop Climate Chaos Scotland Briefing on the Tyndall Centre and Uppsala University report: "Quantifying the implications of the Paris Agreement: What role for Scotland?"
<http://www.stopclimatechaos.org/sites/www.stopclimatechaos.org/files/BriefingTyndall%20Report.pdf>
6. <https://foe.scot/wp-content/uploads/2018/08/FoES-submission-to-ECCLR-call-for-evidence-on-CC-Bill.-Aug18.pdf>

2 Scottish Government's Annual Programme

The Scottish Government's annual programme for government includes a raft of green economy measures. Writing in the foreword to the document, SNP First Minister Nicola Sturgeon vowed that the Scottish government would "*continue to take world-leading action on climate change and reduce the burden of plastics in our seas*".

It said more than £1bn a year would be invested in public transport with a particular focus on new low carbon innovations. "*In particular, we will promote the shift to more active travel for the benefit of our environment and our health, and support innovation in the transport sector,*" the strategy declared. "*We will increasingly focus our investment on low carbon solutions, in pursuit of the ambition we set out last year to phase out the need for new petrol and diesel cars and vans by 2032.*"

Specifically it promised to create at least 20 "electric towns" across Scotland by 2025; install 1,500 new electric vehicle (EV) charge points in homes, businesses and communities, including 150 new public charge points; provide £20m of funding to help motorists and businesses switch to EVs; add more than 500 new ultra-low emission vehicles to public sector fleets; and add over 100 green buses to the fleet through the £1.7m Green Bus Fund.

The Green Party said "*While any investment aimed at reducing carbon emissions is welcome, including this small sum from the government, a hundred new buses out of a fleet of thousands makes a mockery of the First Minister's claim that the investment places Scotland at the 'forefront of low carbon travel'.*"

In addition, it said it would consult next year on a preferred model for a publicly-owned not-for-profit energy company that would be tasked with supporting efforts to tackle fuel poverty. (1) Both Patrick Harvie and Ruth Davidson have criticised the Scottish Government for not delivering rapidly enough on the pledge to set up a public owned energy company. (2)

Meanwhile 61% of Scottish adults in 2017 said they view climate change as an immediate issue, an increase of 6% in one year and up by a third since 2013. Young people appear to be particularly concerned about global warming, while worry is lowest among those in the 75+ age group. (3)

The programme includes a commitment by the Scottish government to publish a progress report “*later this year*” on the delivery of its strategy to supply half of Scotland’s total power needs from renewable sources followed by an annual report in early 2019. (4)

-
1. Business Green 5th Sept 2018 <https://www.businessgreen.com/bg/news/3062118/nicola-sturgeon-pledges-to-continue-scotlands-world-leading-action-on-climate-change>
 2. Utility Week 7th Sept 2018 <https://utilityweek.co.uk/criticism-pace-delivery-scotlands-public-energy-firm/>
 3. Scotsman 4th Sept 2018 <https://www.scotsman.com/news/environment/growing-number-of-scots-believe-climate-change-is-urgent-problem-1-4794801>
 4. Edie 5th Sept 2018 <https://www.edie.net/news/11/Scottish-clean-energy-projects-to-get-increased-investment/>

3 Fuel Poverty

The number of people who died in Scotland over the winter months was the highest in more than 30 years, according to official figures. There were 17,771 deaths registered in the first three months of this year – 2,060 more than in the same period of 2017 and the highest since 1986. A spike in the number of people dying from flu and other respiratory diseases accounted for much of the rise. The UK suffered its worst flu outbreak in seven years over the winter. The flu rate in Scotland doubled in each of the first two weeks of the year before peaking in mid-January and then returning to normal seasonal levels. The country also suffered its worst winter weather in decades. (1)

Minister for Energy, Paul Wheelhouse says despite Scotland’s comparative advantage in energy resources, there are still people in Scotland living in fuel poverty: people who are genuinely forced to choose between being cold and being hungry. That sobering fact requires decisive action. (2)

Now more than two years since Scottish politicians missed their legally binding duty of ending fuel poverty, a new bill has been introduced which will set targets to reduce fuel poverty in Scotland. The Fuel Poverty (Targets, Strategy and Definition) (Scotland) Bill was introduced to the Scottish Parliament at the end of June. But campaigners say the Bill is “too narrowly focused” and will fail to address the “scandal” of cold, damp homes. (3)

While welcoming the introduction of the Bill, the Existing Homes Alliance said it fears that Parliament could miss a ‘once in a generation’ opportunity unless amendments are made. Last month a group of 50 civil society and business organisations launched a joint statement calling for a real Warm Homes Bill that would deliver affordable to heat, low carbon homes for everyone in Scotland. Such legislation would help end fuel poverty, create new jobs and investment, and tackle climate change. A Warm Homes Bill tackling both fuel poverty and energy efficiency was promised in the SNP manifesto for the last Holyrood elections, and has broad cross-party support, though the Scottish Government has thus far introduced a Fuel Poverty Bill.

Alliance chair Lori McElroy said: “More than a quarter of Scottish households are still living in fuel poverty – the same proportion who faced cold homes a decade ago – and over a million homes fall below the energy efficiency standard needed for our health. All political parties agree this is unacceptable. While legislation on fuel poverty is very welcome, this bill is far too narrow, focused just on creating a new definition of fuel poverty and setting new fuel poverty targets. This is incredibly important, but we can do so much more. We urge all MSPs to use the scrutiny process to ensure this legislation is strengthened so it can deliver on the promise of warm homes for all.”

Lori McElroy added: “It is not often that such a wide range of voices from across Scotland come together in such a powerful way. There is a broad, growing consensus across society, business, and among politicians that we need to take real action on fuel poverty and energy efficiency. *“Bringing Scotland’s homes up to a standard of energy efficiency will tackle fuel poverty and climate change, reduce ill-health, improve well-being, reduce inequalities, and create and sustain jobs across Scotland. It is quite simply one of the best investments that the Scottish Government could make.”* (4)

-
1. BBC 13th June 2018 <https://www.bbc.co.uk/news/uk-scotland-scotland-politics-44468655>
 2. Herald 1st Sept 2018 <http://www.heraldscotland.com/opinion/16610271.agenda-councils-can-help-in-our-vision-for-public-energy-company/>
 3. Existing Homes Alliance 27th June 2018 <http://existinghomesalliancescotland.co.uk/news/alliance-calls-for-fuel-poverty-bill-that-will-achieve-warm-homes-for-all/>
 4. Scottish Housing News 28th June 2018 <http://www.scottishhousingnews.com/22201/sector-calls-for-increased-ambition-on-fuel-poverty/>

4 Scottish Energy Company

Scottish Energy Minister, Paul Wheelhouse, says the Government’s ambition is to establish a public energy company which sells energy to customers at as low a price as possible and offers people more choice, particularly those for whom fuel poverty is a real and present concern. There are significant opportunities that could be achieved through developing a public energy company that is involved in both generation and supply, building on Scotland’s natural advantage in renewable sources. Scotland’s Energy Strategy sets out our aspirations regarding local energy systems and solutions.

The Minister says he is keen to build on the work undertaken by some local authorities such as Aberdeen City and Comharile nan Eilean Siar, to offer a fair price to local customers. He wants Scotland’s councils to work with the Government to develop a local authority-based approach. He has written to Cosla to invite member authorities, to work alongside the Scottish Government to achieve the shared goals. This can help support existing local ambitions to support communities and to develop energy solutions. (1)

Holyrood's economy committee issued a call for views on options for a publicly-owned energy firm. The committee wants to hear opinions on whether the plan would cut costs for consumers and how it could promote green issues and energy efficiency. The impact on fuel poverty will be examined as part of the investigation. There are a number of not-for-profit energy companies in existence in the UK and further afield and the Committee will be looking at how they operate and deliver on the core objectives. (2)

The NFLA published a report by Dr David Toke, reader in Energy Politics at Aberdeen University on how Scotland's new energy company could revive renewable energy in Scotland. He argues that the best business strategy for the Scottish Government's proposed Energy Company will be to enable new renewable energy schemes to be established. To do this, the Scottish Government needs to offer long term guarantees of minimum electricity prices for electricity from new renewable energy schemes. He argues that the most successful local energy companies seem to be those that have developed their own energy generation, especially through combined heat and power, based on 'private wire' arrangements. (3)

In England, a number of Councils have developed either fully-fledged energy companies, such as Nottingham's Robin Hood Energy Co and Bristol Energy, while others (including a number of Scottish Councils) have developed a variety of energy models for areas they excel in, or in cooperation with a third party. A recent analysis published in *'The Guardian'* notes there remains real challenge in developing such entities, but many are already providing value at the local level. (4)

The NFLA has also published its submission to the Holyrood Economy Committee. The NFLA expressed support for the concept of a Publicly-Owned Energy Company (POEC) as the focus for promoting further renewable energy, energy efficiency and energy storage schemes in Scotland, but said it needs to be approached carefully. The submission expressed concern that the promotion of new renewable energy projects has been relegated to a second phase. There is a risk that this second phase may never happen.

A POEC which promotes energy efficiency and low cost renewable electricity would have the effect of reducing energy costs for Scottish consumers. It would provide a unique offer to Scottish consumers – a company which can provide cheap low carbon energy. A POEC should support and assist work already going on in local authorities and local communities, rather than setting itself up in competition with other community initiatives. A POEC should also support the innovative work on developing hydrogen and green gas currently going on in Scotland. (5)

-
1. Herald 1st Sept 2018 <http://www.heraldscotland.com/opinion/16610271.agenda-councils-can-help-in-our-vision-for-public-energy-company/>
 2. Scotsman 10th July 2018 <https://www.scotsman.com/news/nicola-sturgeon-keen-to-create-scottish-public-owned-energy-firm-1-4766363>
 3. How Scotland's new energy company could revive renewable energy in Scotland – a personal view by Dr David Toke, Aberdeen University. http://www.nuclearpolicy.info/wp/wp-content/uploads/2018/07/A290_NB177_The_potential_of_a_SEC.pdf

4. The Guardian, 22nd August 2018 <https://www.theguardian.com/business/2018/aug/22/the-heat-is-on-for-fans-of-publicly-owned-energy-companies>
5. http://www.nuclearpolicy.info/wp/wp-content/uploads/2018/08/A292_NB179_Scottish_energy_company.pdf

5 UK Nuclear Plans

The UK's first National Infrastructure Assessment, published by the National Infrastructure Commission (NIC) says the Government risks pushing up the cost of decarbonisation (for everyone in the UK) by building a fleet of new nuclear power stations. The Commission urged the Government not to give the go-ahead to more than one more nuclear power plant before 2025 after Hinkley Point C. since their cost seem unlikely to fall, while renewables are getting cheaper and could prove a safer investment.

The 163-page report says the shift to greener energy is a “*golden opportunity*” and that ministers must act now to seize it. The report sets out how the UK can move to “*highly renewable, clean and low-cost energy*”, while ending the use of gas for heating and shifting to 100% sales of electric vehicle (EVs) by 2030.

It says a “*quiet revolution*” in renewable costs means government should prioritise wind and solar, echoing new scenarios from the Committee on Climate Change (CCC) (see below). It also calls for investment in energy efficiency to triple and for no more than one new nuclear plant to be agreed before 2025.

The commission says: “*It is now possible to conceive of a low-cost electricity system that is principally powered by renewable energy sources.*” It says at least 50% and up to 65% of electricity in 2030 should come from renewables. The average cost of this highly renewable system between 2030 and 2050 would be comparable to investing heavily in new nuclear. However, it recommends a focus on wind and solar, where costs are more likely to fall even faster than expected. This conclusion applies whether heat is predominantly supplied by electric heat pumps or whether it is met using low-carbon hydrogen and biomass. (1)

The government has between six months and a year to respond formally to the NIC's assessment, but does not have to implement its conclusions, meaning opponents have an opportunity to make their case. Richard Lowe, director of power in Aecom's environmental division says the report takes “*an optimistic view*” of the potential for interconnector and battery technology to solve the intermittency issues inherent with renewables. “*Batteries are getting better but it may be 10-15 years before we can deploy them at scale. At current prices they're simply not deployable.*” One senior industry source goes further, describing the assessment as “*garbage*” and predicting that the government will ignore it.

On the other hand, consultant Alistair Smith, formerly nuclear development director at contractor Costain, says most contractors have already lost faith in the nuclear programme. “*Aside from those involved in Hinkley, contractors have lost interest and have moved on to more exciting things.*”

Everyone's been burnt so many times that it would take a lot to convince a chief executive to go for another project again." (2)

The NIC's assessment makes clear beyond any doubt that renewable energy has arrived in a way few thought possible even a decade ago. Spending money on more renewables and energy efficiency measures would create far more stable and certain construction work than lumpy, hard-to-fund nuclear projects. But uncertainties remain around the ability of renewables to provide a base load of energy generation, despite technology advances. The government has a year to decide whether it thinks it can trust the NIC's advice.

Hydrogen

The NIC says the government needs to make progress towards zero carbon heat by establishing the safety case for using hydrogen as a replacement for natural gas, followed by trialling hydrogen at community scale by 2021 and then, if all is well, a trial to supply hydrogen to at least 10,000 homes by 2023, including hydrogen production with carbon capture and storage (CCS). In parallel the NIC says, by 2021, the government should establish an up-to-date evidence base on heat pumps performance within the UK building stock and the scope for future reductions in the cost of installation.

There was no mention of the third possible option, local green heat networks, something the government is beginning to take seriously, at long last, starting up its £320m heat net support programme. That, admittedly, is small, but the Department for Business, Energy and Industrial Strategy (BEIS) has claimed that heat nets could expand from only supplying 1% of building heat demand now, to meet 17% of heat demand in homes and up to 24% of heat demand in industrial and public-sector buildings by 2050. So it's an odd infrastructure omission by NIC.

The NIC also wants to see the rate of installations of energy efficiency measures in the building stock to rise to 21,000 measures a week by 2020, *"maintained at this level until a decision on future heat infrastructure is taken"*. It says that policies to deliver this should include allocating £3.8 billion between now and 2030 to deliver efficiency improvements in social housing. (3)

"Here's a report", says Nils Pratley writing in *The Guardian* *"that must not be lost in the noise of Brexit. It's a once-a-parliament affair from a body that was created to save us from the deadly combination of politicians' machismo and the electoral cycle."* The NIC's job is to inject long-term strategic thinking into the critical business of building important stuff. Its first report contains a devastating conclusion: the government should drop its obsession with building more and more nuclear power stations. The NIC still imagines one more nuclear plant, on top of Hinkley Point C in Somerset, before 2025, but the contrast with the government's current approach is stark. Energy ministers for a decade have told us that a "resurgence" in new nuclear in the UK is the only way to keep the lights on while simultaneously reducing carbon emissions. As for the hideous costs of Hinkley on our energy bills for 35 years, we were told they must be swallowed to get the nuclear show up and running again. Another six plants could be needed, it has been claimed. The government, when it gets back to governing, needs to respond. Its mania for new nuclear plants has looked out-of-date, wrong-headed and unnecessarily expensive for ages. Now even its own infrastructure adviser agrees. A U-turn is required. (4)

There was a similar message in the UK Committee on Climate Change's (CCC's) 267-page annual report 2018. It said *"If new nuclear projects were not to come forward, it is likely that renewables would be able to be deployed on shorter timescales and at lower cost."* (5)

Progress so far on the proposed sites for new reactors in the Westminster Government's National Policy Statement is as follows: (NB the National Policy Statement is in the process of being updated. The NFLA response to the recent consultation on this is available here: http://www.nuclearpolicy.info/wp/wp-content/uploads/2018/02/NFLA_New_Nuclear_Monitor_No52-NPS-.pdf)

Hinkley Point C: construction of two EPR reactors has begun. EDF Energy hopes to complete construction around 2025, but 2027 is more likely.

Wylfa B: An application for Development Consent was received by the Infrastructure Planning Inspectorate on 1st June. On 28th June, the Inspectorate announced that it had accepted the application for examination, and on 6th July it invited interested parties to register. Registration closed on 13th August. The NFLA has published its full submission here: <http://www.nuclearpolicy.info/news/nflaviews-wylfa-b-nuclear-planning-application-inspectorate-outlining-litany-concerns/>

The government is considering using the controversial Regulated Asset Base (RAB) model of financing for Wylfa. This has been described as an "open cheque book" for developers, as consumers could be locked into paying the costs of a project going wrong – like construction taking longer than planned, or prices spiralling – indefinitely until it's complete. (6)

Anglesey County Council's planning committee has approved an application for permission to clear 299ha of land to prepare for construction of the proposed nuclear power plant. This vast swathe of land the size of more than 500 football pitches could be cleared over the next 15 months. It is likely to take up to 18 months for Horizon nuclear to get the Development Consent Order (DCO) required to start building Wylfa B, so it wants to get on with clearing the site now.

Moorside: Plans for a new nuclear power station in Cumbria look set to collapse. The development company NuGen has laid off the majority of its staff. (7) NuGen, owned by Toshiba, the troubled Japanese conglomerate, has been looking for a buyer but, so far, failed to find one. A sale to Kepco, the South Korean utility, has stalled amid political change in South Korea and a British government rethink of the financial support on offer. (8) The GMB Union is calling for the Nuclear Decommissioning Authority (NDA) to be scrapped as it currently exists and a Nuclear Development Agency created to make sure Moorside goes ahead with the Government taking a stake in the financing the project. (9)

Sizewell C: EDF wants to start construction of this sister station to Hinkley Point C in 2021. It wouldn't be expected to start generation until 2031.

Oldbury B Horizon says it's unlikely that construction would even start at Oldbury until the late 2020s at the earliest.

Bradwell B: There is no defined timeline for this station. The Chinese reactor proposed for the site – the UKHPR1000 – has been submitted to the Nuclear Regulators Generic Design Assessment process. This process could take until 2022. (10) Bradwell B nuclear project is entering a new phase according to China General Nuclear Power Corporation (CGN) and EDF. The developers have begun analysing the findings from early investigative work carried out on the site on the Dengie peninsula in Essex. (11)

No proposals have been put forward for **Hartlepool** or **Heysham**.

Drew Hendry MP, the SNP's spokesperson on Business, Energy and Industrial Strategy says *"no matter how strong our arguments are, no matter how many national institutions agree with us, and no matter how clear the facts are, it is impossible to shift the Tories from their ideological commitment to nuclear energy"*. He says *"What really sticks in the throat ...is that directors from the UK Government's Wylfa partner, Hitachi, reportedly want "safeguards that reduce or eliminate Hitachi's financial responsibility for accidents at the plant" despite liability for nuclear developers already being capped at €1.3bn by the Brussels and Paris conventions. They want to abdicate the risk and the taxpayer to pick it up."* (12)

His colleague, Alan Brown MP: says *"With regards the cliché "we need the baseload," as far back as 2015, the chief executive of National Grid argued that the baseload concept was outdated. The only other reasoning I can see is the equally outdated concept of the UK being a world leader in a particular sector. I have my own bias of course, but I would suggest the UK may be the world leader in bad nuclear deals."* (13)

-
1. Carbon Brief 10th July 2018 <https://www.carbonbrief.org/in-depth-uk-can-go-low-carbon-at-no-extra-cost-say-infrastructure-advisors>
 2. Building 24th July 2018 <https://www.building.co.uk/news/infrastructure-report-prompts-warnings-that-overseas-investors-will-pull-nuclear-funding/5094758.article>
 3. Physics World 18th July 2018 <https://physicsworld.com/a/forward-energy-thinking-on-renewables-and-nuclear/>
 4. Guardian 10th July 2018 <https://www.theguardian.com/business/nils-pratley-on-finance/2018/jul/10/government-needs-u-turn-over-mania-for-nuclear-plants>
 5. See page 71. <https://www.theccc.org.uk/wp-content/uploads/2018/06/CCC-2018-Progress-Report-to-Parliament.pdf>
 6. Unearthed 6th August 2018 <https://unearthed.greenpeace.org/2018/08/06/new-nuclear-plantsfunding-regulated-asset-base/>
 7. Guardian 11th Sept 2018 <https://www.theguardian.com/business/2018/sep/11/toshiba-plans-for-new-cumbria-nuclear-power-station-on-verge-of-collapse>
 8. Times 8th Sept 2018 <https://www.thetimes.co.uk/article/staff-layoffs-leave-cumbria-nuclear-plans-on-the-brink-5mfgkcz3j>
 9. Business Desk 10th Sept 2018 <http://www.thebusinessdesk.com/northwest/news/2028025-union-calls-government-step-cumbria-n-plant>

10. <http://www.ukhpr1000.co.uk/the-gda-process/>
11. East Anglian Daily Times 21st Aug 2018 <http://www.eadt.co.uk/business/generic-designassessment-undertaken-on-bradwell-b-ukhpr1000-nuclear-plant-design-1-5660924>
12. Herald 24th July 2018 <http://www.heraldscotland.com/opinion/16372696.agendanuclear-dogma-is-costing-the-country-dear/>
13. Politics Home 24th July 2018 <https://www.politicshome.com/news/uk/energy/nuclear-power/opinion/house-commons/97117/alan-brown-mp-government-mustnt-sign-crazy>

6 Dounreay – nuclear transports

An investigation has been launched after a freight train carrying nuclear material ran a stop signal near to Kingussie in July. The service was carrying spent fuel from Dounreay to Sellafield. It came to a stop after travelling past a red light before being moved to a “position of safety” by concerned officials.

Highland Against Nuclear Transport (HANT) said the incident should be a matter of concern because it is one of a number of such incidents involving the movement of nuclear spent fuel and waste from Dounreay to Sellafield

HANT says moving highly radioactive material from a secure site by sea and rail creates unacceptable risks. Since these movements began accidents have included a derailling at Barrow and the breakdown of a ship in the Pentland Firth in October 2014 carrying nuclear waste from Dounreay to Antwerp - it took 15 hours for an Emergency Towing Vessel to reach the ship and personnel on an oil rig had to be evacuated as there was a likelihood of a catastrophic collision.

In addition, since 2017 Highly Enriched Uranium is being flown from Wick Airport to the USA via RAF Lossiemouth. The reason the USAF transport planes have to fly to Lossiemouth is to refuel as the runway at Wick is 1000 feet too short for the plane to take off with a full load of fuel despite the Nuclear Decommissioning Authority spending £8 million to upgrade it

Direct Rail Services (DRS), the company which handles the rail shipments said they understand there was no risk of collision due to the error at Kingussie. However, concerns have been raised as to why a train loaded with radioactive material was allowed to sit there for almost two hours. An investigation has since been launched into the circumstances of the “highly-disturbing” incident.

Tor Justad, chairperson of HANT, said: *“We know that low-level radiation is emitted from these canisters so to hear that the train was sitting at Kingussie for hours is concerning.”* (1)

The NDA said that “as a result of a ‘signalling irregularity’ on the network infrastructure the driver of the train was not given the required advanced warning that a red light was ahead. As soon as the red light was observed the driver brought the train safely to a standstill. (2) The train was forced to wait for nearly two hours at the location while safety checks were carried out. Direct Rail Services said that there was never at any time a risk of the train being involved in a collision. But Badenoch and Strathspey MP Drew Hendry (SNP) said it was unthinkable to imagine what could have occurred. He

said: "We must be thankful that nobody was hurt or directly affected but make no mistake this is an alarming incident and further underlines the dangers of operating nuclear facilities and moving toxic nuclear waste. For DRS to say that there was no risk is simply not acceptable. Stop signs are there to indicate the danger of proceeding, usually of a train coming the other way. It is unthinkable to imagine if that had been the case. Disappointingly, this incident reaffirms the significant risks around nuclear transport and the urgent need for a review of procedures. I am calling for an open, transparent inquiry into this incident and a stop to all shipments until it is complete. "This cannot be allowed to happen again."

Dozens of anti-nuclear campaigners from across the north of Scotland descended on Inverness in August to protest against radioactive waste transport when HANT joined forces with the Cromarty Peace Group (CPG)

- The far north is gradually weaning itself off its long-time dependence on Dounreay, according to a jobs creation think-tank. Local businesses are finding a greater share of work elsewhere, while new ventures are coming on stream to help replace posts being shed at the nuclear plant, the group said. The upbeat update was from Caithness and North Sutherland Regeneration Partnership, which was formed 10 years ago in the wake of concern about prospects for the area as its anchor employer ran down. (5)

-
1. Herald 16th July 2018 <http://www.heraldscotland.com/news/16356092.investigation-launched-after-train-carrying-nuclear-material-ran-stop-signal-at-kingussie/>
 2. Letter from NDA to NFLA dated 30th August 2018
 3. Strathspey Herald 19th July 2018 <https://www.strathspey-herald.co.uk/News/Alarm-over-Kingussie-nuke-train-incident-19072018.htm>
 4. Press & Journal 31st Aug 2018 <https://www.pressandjournal.co.uk/fp/news/highlands/1551960/anti-nuclear-protestors-stage-demonstration-against-the-transportation-of-nuclear-waste/>
 5. Energy Voice 18th June 2018 <https://www.energyvoice.com/other-news/174383/promising-outlook-for-far-north-thinktank/>

7 Nuclear Waste Strategy

The NDA is consulting on its single radioactive waste strategy which will apply to all radioactive waste generated within the NDA Group, including materials that may become waste at some point in the future. The consultation closes at midday on 31 October 2018.

According to the website: <https://www.gov.uk/government/consultations/nda-radioactive-waste-management-strategy> the strategy only applies to England, Wales and Northern Ireland. In fact the proposals are a consolidation of various consultations which have gone before. In 2016 the NFLA described the emerging picture as:

“...a worrying picture ... of an evolving strategy for the NDA which is straying even further from important environmental principles [with] increasing quantities of radioactive waste “diluted and dispersed” around the environment by diverting it to landfill, discharging into estuaries, seas and atmosphere using dissolution plants, metal recycling plants and incinerators – masquerading as the environmentally-friendly sounding “waste hierarchy”.

According to NuLeaf (The Nuclear Legacy Advisory Forum) much material (up to 90%) has been diverted from disposal at the Low Level Waste Repository at Drigg in Cumbria (LLWR). Much Very Low Level Waste (VLLW) is sent to specialist landfill sites at King’s Cliffe in Northamptonshire, Lillyhall in Cumbria and Clifton Marsh in Lancashire. Other types of facility include radioactive metal recycling plant and incinerators. The 2016 NDA Radioactive Waste Inventory makes great play of the fact that *“over 85% of LLW is diverted away from the LLWR by using more sustainable waste management routes.”*

It continues: *“The waste hierarchy encourages new approaches for managing LLW in a more sustainable way”.* The concern is that these so-called *“more sustainable routes”* amount to spreading the waste around the country and thus diluting and dispersing radioactivity around the environment. And all of this applies equally to Scotland.

The NDA Consultation Document says *“disposal of radioactive waste should follow a risk-based approach”.* The document also talks about *“making best use of capacity and capabilities that either exist now or could be developed in the future”.*

This *modus operandi* is virtually the opposite to concentrating and containing radionuclides, as advocated in the NFLA environmental principles. It means permitting this disposal of radioactive waste in various ways to save money provided it can be shown that the increased risk to the public is ‘acceptably’ low.

The NDA consultation document is proposing to support (indeed the NDA already does support)

- Leaving waste in situ or dumping it on decommissioned nuclear sites;
- Sending waste to commercial landfill sites;
- Continuing to send Low Level Waste to the LLWR facility at Drigg and the LLW disposal site at Dounreay;
- The possibility of near surface disposal of ILW in England and Wales, not just in Scotland.
- Deep Geological Disposal.

Along with several ‘treatment’ methods mentioned, such as incineration and so-called ‘decontamination’ and ‘recycling’ many of these ‘disposal’ methods will have the effect of increasing the collective radiation dose to the UK population.

If we accept the ‘linear no threshold model of radiation protection’ this means there is no safe level of radiation. So morally nuclear waste policy should be about limiting and restricting discharges and dispersal of radioactivity into the environment, and aiming for a goal of zero discharges. If there are cases where, as the Government claims, complete containment is not a ‘practical proposition’

because of practices which have been carried out in the past then the waste producers need to make the case for an exception to be made.

8 Energy Efficiency

One piece of news that often escapes notice is that Britons' energy bills are actually falling. Last year a report from the Committee on Climate Change (CCC) showed that since the introduction of the Climate Change Act in 2008, the average annual energy bill had fallen by more than £100. This has been largely driven by a decline in the amount of gas and electricity we use in our homes, which, in turn is largely the result of energy efficiency measures, some funded from levies on bills. These policies reduce the amount of heat that is wasted from homes and cut the power needed to run appliances and lighting.

Now a new report shows that the average standard dual fuel bill fell by £6 from 2016 to 2017. This figure is adjusted for different weather (and thus energy demand) between the two years. Without the adjustment, the fall is £36. On a national basis, this fall continues to more than offset the litany of tariff increases implemented by the Big Six energy suppliers. Since 2008, expenditure on electricity and gas across all British homes has fallen by nearly £4 billion.

Unfortunately nearly two-thirds of MPs thought that energy bills were rising. Polling of MPs shows that the majority are unaware that both household bills and energy use are falling, despite intense debates around the price cap. Britain's falling energy bills is a piece of 'good news' that is seldom told. As well as a financial boon to most householders, it is also a triumph for policymaking, given that the bill reductions can partly be attributed to policies that cut energy waste – both in buildings and appliances. (1)

Andrew Warren, chair of the British Energy Efficiency Federation, argues that falling energy use should spark a reappraisal of government energy policy. The UK's energy statistics for 2017 confirm the continuing trend of falling energy consumption. Primary energy consumption in the UK has now fallen by 19% since the start of the century. Actual figures are 236,856 ktoe then, 192,126 ktoe now. This has happened even though our overall wealth as a nation has grown over that period by well over one-half. In other words we have succeeded in decoupling growth in living standards from growth in energy consumption. According to government forecasts at the time of the last Energy White Paper in 2006, the Paper which reinvented the need for 10 new nuclear fission power stations, we should by now be consuming approaching 30% more electricity than we actually are. (2)

- A review of the energy standards of the Scottish Building Regulations has commenced to consider the next steps to further enhance the energy performance of buildings and contribute to greenhouse gas abatement targets set under the Climate Change (Scotland) Act 2009. (3)

1. Energy Bills: The Untold Story, ECIU, August 2018
https://eciu.net/assets/ECIU_Energy_Bills_Untold_Story.pdf
2. See <http://www.no2nuclearpower.org.uk/wp/wp-content/uploads/2018/09/NuClearNewsNo110.pdf>
3. Scottish Government 25th June 2018 <https://consult.gov.scot/local-government-and-communities/building-standards-energy/>

9 Offshore Wind

The UK Government has announced plans to add between 1GW to 2GW of renewable wind power annually throughout the 2020s, after Energy and Clean Growth Minister Claire Perry outlined the next wave of Contract for Difference (CfD) auctions. Offshore wind and, for the first time, remote island wind providers are eligible to bid for contracts at the next CfD auctions, which will take place in May 2019 and then every following two years. The UK Government has set aside £557m for these auctions and, depending on prices, could deliver up to 2GW of additional wind capacity each year in the 2020s.

The announcement has been welcomed by the renewables industry, with RenewableUK suggesting that offshore wind could generate approximately 20% of UK power as a result of the auctions, compared with 6% today.

The falling cost of offshore wind generation is likely to raise questions over the UK government's policy of supporting nuclear development, including Hinkley. Kate Blagojevic, Head of Energy at Greenpeace UK said the cost of developing offshore and onshore wind and solar was now far cheaper than nuclear. (1)

This announcement could mean that Britain will double offshore wind capacity by 2030. Offshore turbines capable of generating up to 7GW of electricity have been built in British waters. Last year, offshore wind generated 6.2% of UK electricity needs. Projects capable of generating a further 7GW of power are either under construction or have won contracts to start generating by 2022-23. If a further 2GW is built each year for the rest of the 2020s, that could mean an additional 16GW is built by 2030. (2)

- The windfarm off the coast of Angus – Inch Cape – which was the subject of a legal battle between the Scottish Government and RSPB – has announced plans to reduce the number of turbines by a third to 72, but they will be bigger and more powerful than originally proposed. Nevertheless the 700MW scheme will produce enough electricity to power roughly 25% of Scottish homes. It will transmit power to a substation at Cockenzie in East Lothian. Inch Cape Offshore is owned by Chinese firm Red Rock Power. (3)
- The Beatrice windfarm in the Moray Firth produced its first power in July, on track to powering nearly half a million homes by 2019, following the successful installation of the first 7 MW turbine. Situated 13 km off the Caithness coast, the £2.6bn windfarm funded by SSE, is not only one of the largest private investments in Scottish infrastructure, it is also the largest offshore windfarm in the world built using jacket foundations. The jackets hold the

distinction of being the deepest fixed foundations of any offshore windfarm, each weighing in at circa 1,000 tonnes and being installed in water depths of up to 56 m. (4)

-
1. Edie 23rd July 2018 <https://www.edie.net/news/10/UK-Government-plots-course-to-add-to-offshore-wind-capacity/>
 2. Times 24th July 2018 <https://www.thetimes.co.uk/edition/business/wind-power-set-to-double-by-2030-under-new-plans-2jsh9589r>
 3. Dundee Evening Telegraph 30th Aug 2018 <https://www.eveningtelegraph.co.uk/fp/plans-for-72-wind-turbines-in-north-sea-off-local-coast/> and Scotsman 24th Aug 2018 <https://www.scotsman.com/news/environment/new-plan-for-controversial-angus-offshore-wind-farm-1-4788955>
 4. Scotsman 23rd July 2018 https://www.scotsman.com/news/opinion/gina-hanrahan-offshore-wind-energy-is-set-fair-in-uk-1-4772913_ and Offshore Wind Journal 20th July 2018 https://www.owjonline.com/news/view,scottish-offshore-windfarm-sends-first-power-to-the-grid_53595.htm

10 Island Energy

Remote island wind projects might still struggle to be awarded subsidies in upcoming auctions due to the absence of a price floor, the government has admitted, according to *Wind Power Monthly*. The extent to which such projects will be able to compete against other technologies is “*highly uncertain*”. Island wind projects would have higher construction and operating costs, largely due to the need to connect them from the mainland — an expense which would only be partly offset by increased load factors. The Island projects will be competing against advanced conversion technologies, dedicated biomass with CHP (combined heat and power), and offshore wind. Contracts last time were awarded for support ranging between £40/MWh and £74.75/MWh. Typically, offshore projects have greater capacities than onshore wind farms and benefit from project synergies with other sites in the same offshore area — particularly when it’s the same developer — thereby reducing prices. The cheapest wind farms in the September 2017 CfD round, securing deals at £57.50/MWh, were Hornsea Project Two (1,386MW) and Moray East (950MW). In contrast the EDF-led consortium plans to enter its 180MW Stornoway project on Lewis into the May 2019 tender round. (1)

Four townships in the Western Isles are hoping to take advantage the auction to develop community-owned wind farms. The townships — Sandwick North Street, Sandwick East Street, Aignish, and Melbost and Branahuie — have announced their intention to bid in the Contract for Differences (CfD) auction for renewables subsidies next May. They have lodged applications with the Crofting Commission for permission to go ahead with the developments on their common grazing lands. It is believed to be the first time any community organisations will bid for a subsidy in the CfD scheme, which was set up primarily for multinationals to help offset the extra costs that come with

developing technologies. The townships will be bidding in the remote island wind category and will be going head-to-head against bigger schemes planned for the islands. (2)

The communities in Sandwick with Aignish and Melbost plan to take control of 21 turbines with a total output of 105MW from EDF and provide annual income 100 times more than what the energy giant proposes. Although four different schemes, they all meet or exceed the 5MW threshold for eligibility for the subsidy scheme. It is the latest twist to a saga that has seen the townships locked in a legal battle with EDF and its partner Wood Group in an audacious bid to build their own smaller project. The townships have applied to the Crofting Commission for an area big enough for 21 turbines to be effectively removed from EDF's control and given to them. But the multinational's operating arm, Lewis Wind Power, has filed a petition at the Scottish Land Court, asking it to throw out the crofters' objections and approve its lease. (3)

Western Isles MSP Alasdair Allan stressed onshore wind power development in his constituency depends on laying a subsea cable – or interconnector – to link future projects to the mainland grid. *“I think there is potential for economic development in island communities and for Scotland as a whole. We have been talking about wind power in the Western Isles for a long time but now have the opportunity to do something transformative – but it hinges on the UK Government agencies and the industry itself.”* (4)

Energy supplier SSE is seeking permission to connect the Western Isles to the mainland power grid. It has submitted its case to regulator Ofgem for the deployment of a subsea cable transmission link with the Scottish mainland that could “unlock the renewable potential of the Western Isles”. If authorised by Ofgem, the Western Isles Radial Connector could be laid by 2023. The project is dependent on two planned large-scale wind farm projects, Stornoway Wind Farm and Uisenis Wind Farm, securing subsidy support from the UK government's Contracts for Difference next year. SEN has long argued that major renewable projects have to be constructed in the Western Isles for the subsea cable to be viable. (5)

-
1. Wind Power Monthly 31st Aug 2018 <https://www.windpowermonthly.com/article/1491621/remote-uk-projects-competitiveness-highly-uncertain>
 2. Times 3rd Aug 2018 <https://www.thetimes.co.uk/edition/scotland/western-isles-crofters-face-edf-in-wind-farm-bid-lewis-wind-power-hw3dhgh8g>
 3. Herald 2nd Aug 2018 <http://www.heraldscotland.com/news/16392143.crofters-step-up-their-david-v-goliath-windfarm-battle-with-5million-at-stake/>
 4. Press & Journal 24th July 2018 <https://www.pressandjournal.co.uk/fp/news/highlands/1527188/island-communities-to-benefit-from-600m-offshore-wind-fund/>
 5. BBC 14th Aug 2018 <https://www.bbc.co.uk/news/uk-scotland-highlands-islands-45181499>

11 Onshore Wind

Lord Deben, the chair of the committee on climate change (CCC), says there was no logical argument against onshore wind turbines in the parts of the UK that want them. Ministers must come clean to households about the higher energy bills they face if the Government continues to deter new onshore windfarms, the government's top climate change adviser has said. Onshore wind is the cheapest form of electricity generation. (1)

Building more onshore wind farms could save consumers £1.6 billion on their energy bills, according to a new study by BVG Associates for Scottish Power. Cost reductions mean that new projects could offer electricity more cheaply than the market price, the analysis suggests. About 7,000 onshore wind turbines have been built in the UK, capable of generating up to 12 gigawatts of power. They are commercially viable thanks to subsidies paid on energy bills. More than four gigawatts of further projects involving an estimated 1,800 turbines have planning consent, mainly in Scotland. However, development has ground to a halt since the government ended onshore wind subsidies in 2015. The wind industry is lobbying the government to revive the sector, arguing that it could save consumers money.

The analysis suggests that from 2023 wholesale market prices would be higher than those needed by onshore wind farms. Instead of needing a subsidy, onshore wind farms would pay back the extra they received in the market to consumers. BVG modelled the outcome if five gigawatts of turbines were given contracts from 2019 to 2025. "Over the 15-year [contract] period, the net payback to the consumer would be more than £1.6 billion, benefiting household bills," it said. It added that if onshore wind farms were awarded contracts next year, they would need £45.60 per megawatt-hour, compared with the guaranteed price of £92.50/MWh offered to Hinkley Point. (2)

- More than two thirds of British people, including 61% of Conservative voters, want see new onshore wind farms developed in the UK where they have local backing, according to a new YouGov poll for trade body RenewableUK. The survey of more than 3,600 adults carried out in June found clear majority backing for a change in current government policy to allow onshore wind developers to compete in Contracts for Difference (CfD) price support auctions. (3)
- MPs are largely unaware of the plummeting cost of onshore and onshore wind farms. A YouGov poll found that only eight per cent of MPs were able to correctly identify onshore wind farms as the cheapest form of new power generation capacity. Similarly only 9% of MPs thought strong opposition to onshore wind farms was below 5% – the most recent government tracker poll put it at just 2% – while over half of MPs though strong opposition to wind farms enjoyed over 20% support amongst the public. (4)
- A German renewables company has won planning permission for a wind farm near Hawick that will be the first wind farm in Scotland built without a state subsidy. It is hoped that a major international company will strike a long-term power purchase agreement (PPA). PPAs could form the economic basis for setting up more wind farms in Scotland. (5)

- A community energy project is urging investors to back a project which will operate 12 wind turbines near Humbie and help tackle fuel poverty. The new scheme offers people an opportunity to support Our Community Energy – a partnership between not-for-profit Scottish firm Our Power and Mongoose Energy, which manages community energy assets – and hopes to find investors in the county. They say that the site at Pogbie Windfarm – already home to the turbines – will create enough energy to power 7,200 homes and believe that, when they combine it with a second site in Berwickshire, the scheme will raise an estimated £1.9 million in surplus profit over 25 years. (6)

-
1. Guardian 10th June 2018 <https://www.theguardian.com/business/2018/jun/10/detering-onshore-windfarms-means-higher-energy-bills-lord-deben>
 2. Times 11th June 2018 <https://www.thetimes.co.uk/edition/business/onshore-wind-farms-could-blow-in-1-6bn-of-savings-9dwn66t3d>
 3. Business Green 16th July 2018 <https://www.businessgreen.com/bg/news-analysis/3035919/two-thirds-of-britons-favour-new-onshore-wind-power>
 4. Business Green 25th July 2018 <https://www.businessgreen.com/bg/news/3036455/mps-unaware-of-popularity-and-cost-competitiveness-of-onshore-wind-farms>
 5. The National 30th Aug 2018 <http://www.thenational.scot/news/16606677.german-owned-wind-farm-in-hawick-ready-for-construction/>
 6. East Lothian Courier 13th June 2018 http://www.eastlothiancourier.com/news/16288512.Call_for_community_to_invest_in_Humbie_wind_farm/

12 Tidal Power

Proponents of marine power now accept that ambitious forecasts made for the first round of seabed leases in the Pentland Firth and Orkney waters are going to fall well short. When the Crown Estate unveiled the 11 sites in 2010, it set the developers the challenge of generating 1.6 gigawatts (GW) of electricity over the next 10 years – enough to power a million homes. But market conditions have conspired to mean that just one development, Atlantis’s trailblazing MeyGen scheme, between the mainland and the island of Stroma, has gone live.

The ongoing high cost of marine power, particularly wave energy, has led to the other schemes being put on hold, with no clear timescales. Two of the prospective developers, Aquamarine Power and Pelamis Power, have gone to the wall. The high costs compared to other power sources and the recent failure of Atlantis to secure a guaranteed minimum price for energy produced from its MeyGen site have caused some would-be investors to get cold feet. Industry backers are calling for more support for the sector if Scotland’s world lead in marine power is not to be lost.

Scottish Renewables believes the Contract for Difference model militates against the development of marine energy. Innovative new technologies are unable to compete with the very low prices

achieved by offshore wind, which has effectively left marine energy locked out of the mechanism to sell its power at scale. Industry is calling on the UK Government to recognise that wave and tidal are at a different stage of development to mature technologies like wind and solar power, and to support them until they can compete. Doing so would allow these devices, and the skills which they're helping Scotland create, tap into an enormous potential global market, driving supply chain and social benefits for the whole of UK Plc.

MeyGen remains the jewel in the crown since it was commissioned in late 2016 after its first array of four sub-sea turbines started producing 6MW (0.006GW) of power. The £50 million-plus investment is being followed up with a further four turbines in a development which is scheduled to see the site produce 398MW by the early 2020s. (1)

A floating tidal stream turbine off the coast of Orkney has produced more green energy in a year than Scotland's entire wave and tidal sector produced in the 12 years before it came online. In 12 months of full-time operation, the SR2000 turbine supplied the equivalent annual power demand of about 830 households. Scotrenewables Tidal Power, said: "*The SR2000's phenomenal performance has set a new benchmark for the tidal industry*" It produced 3GWh of renewable electricity during its first year of testing at the European Marine Energy Centre.

The team at Scotrenewables said their success – combined with Meygen's generation of more than 8GWh over the past year from four tidal turbines deployed in the Pentland Firth – is evidence that tidal power generation could be rolled out more widely. (2)

But even this company is dismayed at the total lack of market support here in the UK for the technology, and says it has no option but to focus on overseas opportunities. (3)

Meanwhile, Industrial magnate Sanjeev Gupta – saviour of a threatened aluminium smelter in Lochaber – and Atlantis Resources chief executive Tim Cornelius have been celebrating a reverse takeover. Atlantis will be transformed into a diversified energy company - Simec Atlantis Energy, with a diversified portfolio of more than 1,000 megawatts in various stages of development. The MeyGen tidal scheme for which Atlantis is best known has seen four turbines successfully installed in the last year and generating power to the grid - more than 7 GWh to date. Additionally, in November, heads of terms were inked with the Duchy of Lancaster for an option for the long-term lease of the riverbed required to develop the Wyre estuary tidal barrage and flood-protection project. (4)

-
1. Energy Voice 20th Aug 2018 <https://www.energyvoice.com/otherenergy/179452/scottish-marine-energy-to-fall-well-short-of-million-home-forecast/>
 2. Independent 22nd Aug 2018 <https://www.independent.co.uk/environment/scotland-floating-turbine-tidal-power-record-sr2000-scotrenewables-ofgem-a8503221.html>
 3. The National 22nd Aug 2018 <http://www.thenational.scot/news/16590106.scottish-tidal-power-at-risk-due-to-lack-of-market-support/>
 4. Scotsman 19th June 2018 <https://www.scotsman.com/future-scotland/tech/pentland-firth-tidal-energy-pioneer-hails-2017-as-pivotal-year-1-4756087>

13 Renewable Notes

From March next year, the government plans to scrap the export tariff payment for people who get solar panels. This means they won't be paid for the excess energy they produce, while producers of other types of power, like dirty oil and gas will still receive payment. Over 62% of British people say they'd like their own solar panels to help power their homes. But bit by bit the government is removing the incentives that help people to do so - devastating the solar industry and jobs. Greenpeace is asking supporters to tell the government this is a terrible idea.

See <https://secure.greenpeace.org.uk/page/s/stop-the-solar-attack>

Dr Sam Gardner, acting director at WWF Scotland, writes the transformation of the electricity sector in Scotland over the past ten years has seen renewable output rise from 24% in 2010 to 68% in 2017. At the same time, of course, we have seen thousands of jobs created and costs of onshore wind, solar and offshore wind tumble. We've clearly come a long way and that should be celebrated, but we can't rest on our laurels. If we're to fulfil the ambition of the energy strategy published last year, which cemented the Scottish Government's ambitions to deliver half of all our energy from renewable sources by 2030, we need to transform how we heat our homes and offices and how we travel to work and school. Electrifying our heat and transport systems will have a significant role to play in delivering low-carbon heat and transport. So how can we ensure the renewable sector continues to grow? First and foremost, we need the UK Government to urgently provide a route to market for mature technologies like onshore wind and solar and to support newer technologies like tidal power in the next auction round.

Scotsman 21st Aug 2018 <https://www.scotsman.com/news/opinion/sam-gardner-scotland-has-limitless-amounts-of-renewable-energy-1-4787413>

Rapid electric vehicle chargers have been added to a solar and storage hub in Dundee to utilise the clean electricity generation and batteries to charge the city's fleet of electric vehicles. EVolt has installed six of its Raption 50kW Rapid Chargers, capable of charging two vehicles simultaneously in approximately 30 minutes, and three 22kW eVolve chargers. They will be used alongside other chargers to make use of the generation from the 36kWp solar canopies at the site and join the 60kW/90kWh E-STOR system from Connected Energy, which uses second life batteries from Renault. This is the first hub of its kind, combining EV charging, solar canopies and energy storage. It offers 18 parking bays beneath the solar canopies in Dundee city centre. It is the second of three to be built in Dundee using £5 million awarded by the Office for Low Emission Vehicles (OLEV) under the Go Ultra Low programme.

Solar Power Portal 19th July 2018

https://www.solarpowerportal.co.uk/news/rapid_chargers_to_utilise_solar_and_storage_in_dundees_first_of_its_kind_pr

Glasgow City Council has secured £940,000 from the European Commission to realise its plan to transform a city car park into a solar power centre. The award from the EU Horizon 2020 fund will go towards building a canopy of solar panels above the council-owned car park on Duke Street. The

panels will be primarily used to power the car park, which includes ten charging points for electric vehicles. Money from the award will also be used to install a 500kW battery and a controller.

Transport Extra 20th June 2018 <https://www.transportextra.com/publications/parking-review/news/58140/glasgow-secures-940k-eu-funding-for-solar-car-park>

Old coal mines in Scotland are set to become a leading research hub for renewable heat technologies, after plans were approved by Glasgow City Council and South Lanarkshire Council. Work on the £9m Glasgow Geothermal Energy Research Field Site, based in East Glasgow where some of Scotland's busiest coal mines were once located, is now set to begin this autumn. The site aims to become a world class research centre on the potential for using old coal mines to generate harness-able low carbon heat. Scientists plan to drill narrow boreholes into the ground to measure the temperature, water flow and seismic activity in the disused mine tunnels underground the city, in order to establish whether the warm water could be harnessed to heat Glaswegian homes. The site is one of two proposed sites proposed under the UK Geenergy Observatories programme led by the Natural Environment Research Council (NERC), the UK's leading funder for environmental sciences, and the British Geological Survey (BGS), the UK's principal provider of impartial geological evidence since 1835. Tracy Shimmiel, the co-director of BGS Scotland's Lyell Centre, said the research hub will further understanding of how Scotland can use its old industrial sites to accelerate the transition to a low carbon economy.

Business Green 29th Aug 2018 <https://www.businessgreen.com/bg/news/3061748/old-coal-mine-to-become-green-heat-research-hub>

SCOTTISH farming leaders do not want to see farm-scale renewable energy production die with the planned demise of the feed-in tariff next year. Responding to the UK government's publication of a series of documents detailing the proposed closure of the FIT scheme – and the associated 'Call for Evidence' on the future for small-scale low-carbon generation – NFU Scotland this week pledged to lobby for new measures to encourage continued take-up. *"For farming businesses, renewable energy production has provided an opportunity to diversify income streams and reduce energy costs,"* said the union. *"There has been significant uptake of renewable energy since the Energy Act 2008 which introduced FiTs for community or locally owned renewable energy sites. The total installed capacity of renewables electricity in Scotland has trebled since 2008. Production from community and locally owned renewable energy sites are responsible for almost 20% of total Scottish renewable energy production. On Scottish farms and estates, renewable energy production has increased by 65% since 2011."*

Scottish Farmer 25th July 2018 <http://www.thescottishfarmer.co.uk/news/16376972.union-stresses-support-for-farm-renewables/>

A £10.8m smart energy project testing how solar power, smart heating and electric vehicles (EVs) can be used to improve the energy system on the Isles of Scilly has had its first set of storage batteries installed. UK-based smart battery developer Moixa Technologies has begun installing smart batteries on the Isles of Scilly for use in households and non-domestic sites in a bid to cut the islands' electricity bills by 40%, source 40% of energy demand from renewables and create a 40% share of the transport market for low-emission vehicles by 2025.

Edie 24th July 2018 <https://www.edie.net/news/8/First-batteries-installed-for-Isles-of-Scilly-smart-storage-project/>

The number of community-owned renewable energy projects in Scotland has surged by 62% since 2011 – with over 450 local communities now benefitting from green power initiatives. Initiatives such as the Community Empowerment Act and the Local Energy Challenge Fund have helped support communities to develop their own low-carbon energy. This has allowed 456 communities to benefit from wind, solar, hydro, heat pump and biomass projects across the country, a growth of over 62% in the last 7 years, according to stats from the independent Scottish Parliament Information Centre.

The National 11th Aug 2018 <http://www.thenational.scot/news/16412977.surge-in-number-of-community-owned-renewable-energy-projects/>