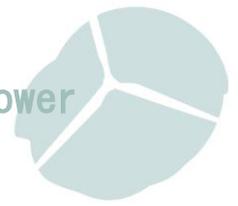


No.111 October 2018

1. **Brexit Britain's Energy Policy Stuck in the Past**
2. **Moorside on the rocks?**
3. **Hinkley in Paris Court**
4. **Bradwell Update**
5. **Wylfa Ploughs On**
6. **Sizewell C – a figment of the imagination**
7. **Labour Moves**



# 1. Brexit Britain's Energy Policy Stuck in the Past

According to Bloomberg, Brexit has brought Britain to a standstill: *"The country—as an administrative entity—has virtually stopped working ... the daily business of running the country is suffering. Ministers just don't have the time to attend to the needs and ambitions of ordinary citizens."* Labour MP Mary Creagh, chair of Parliament's Environment Committee says: *"It means the normal decision-making of government is not happening and has not happened for two years."* (1)

As we reported in nuClear News No.109 the National Infrastructure Commission (NIC) has told the Government it shouldn't build more than two new nuclear stations (about 6GW). (2) And the Committee on Climate Change (CCC) says that *"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."* (3) Yet the Government is sticking steadfastly to its plans to go-ahead with up to 18GW of new nuclear capacity.

Nor has there been any serious attempt to consider non-nuclear scenarios, or respond with formal rebuttals to suggestions put forward by the NGO community. Ministers still talk about nuclear baseload despite the fact that the debate outside of pro-nuclear circles has moved way beyond that. Ministers and top civil servants now no longer appear to be even attending forums set up with NGOs to discuss these issues.

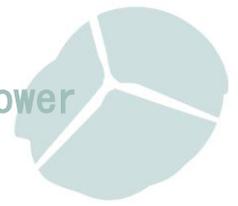
Drew Hendry MP, the SNP's spokesperson on Business, Energy and Industrial Strategy, takes the words right out of the mouth of many of the NGOs when he says: *"no matter how strong our arguments are, no matter how many national institutions agree with us, and no matter how clear the facts are, it is impossible to shift the Tories from their ideological commitment to nuclear energy"*. (4)

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."* (5)

But perhaps there is more hope than first appears. If, rather than an ideological obsession with nuclear it's just that, because of the focus on Brexit, the Government hasn't looked in any detail at new developments over the past two years, we could well find that when things get back to some semblance of normality, the Government starts to act on recommendations from bodies like the NIC and CIC.

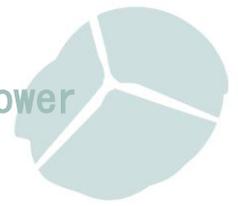
Here are a few pointers to help the Government catch up:

- Last year the CCC showed that since the introduction of the Climate Change Act in 2008, the average annual energy bill had fallen by more than £100. (6) Energy efficiency policies have reduced the amount of heat that is wasted from homes and cut the power needed to run appliances and lighting. Primary energy consumption in the UK has now fallen by 19% since the start of the century, from 237 million tonnes of oil equivalent (mtoe) in 2000 to 192 mtoe now. This has happened even though our overall wealth as a

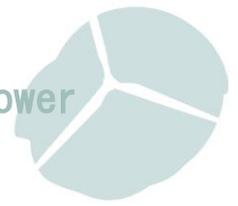


nation has grown over that period by well over one-half. In other words we have succeeded in decoupling growth in living standards from growth in energy consumption. (7) According to government forecasts at the time of the last Energy White Paper in 2006, which reinvented the need for 10 new nuclear stations, we should by now be consuming approaching 30% more electricity than we actually are. Logically this should spark a review of the National Policy Statements on Energy. The NIC calls for investment in energy efficiency to triple.

- Lord Deben, the chair of the CCC, says there was no logical argument against onshore wind turbines in the parts of the UK that want them. Onshore wind is the cheapest form of electricity generation. (8) Building more onshore wind farms could save consumers £1.6 billion on their energy bills, according to a study by BVG Associates for Scottish Power. 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. 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. (9) More than two thirds of British people, including 61% of Conservative voters, want to see new onshore wind farms developed in the UK where they have local backing. (10) Over half of MPs think strong opposition to wind farms enjoys over 20% support amongst the public, yet the most recent government tracker poll put the figure at just 2%. (11)
- The UK Government is risking billions of pounds of new investment opportunities by failing to open up new avenues to deployment for the onshore wind sector, according to a new report from industry body RenewableUK. The UK achieved record levels of installations for onshore wind capacity in 2017, as more than 2,600MW came online representing an investment value of £5.3 billion to the UK purse. According to the report, future levels of growth are at risk as onshore wind is currently blocked from competing for new power contracts under the Contracts for Difference (CfD) auctions. (12)
- The NIC says the shift to greener energy is a “golden opportunity”. The UK could 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: “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. (13)

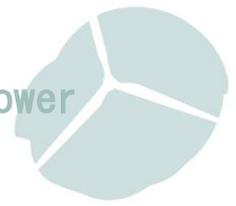


- The NIC recommends that the government should set out a pipeline of onshore wind and solar Contracts for Difference auctions, to deliver at least 50% renewable generation by 2030, as part of the transition to a highly renewable generation mix.
- Evidence is growing that highly flexible electricity systems could deliver lower whole-system costs, especially given the dramatic projected falls in solar and wind power costs by 2030. Centrica's CEO Iain Conn says he expects demand side response to become one of the fastest growing elements of the energy market over the next few years. (14) The cost of decarbonising the UK's energy sector could be cut by nearly £7bn a year through the widespread adoption of emerging energy "flexibility" technologies capable of better managing domestic supply and demand according to a new analysis from Imperial College London and OVO Energy. The report said that using flexibility technologies to lower peak demand and better match demand to flexible renewable energy supplies would sharply reduce grid upgrade costs and allow the UK to maximise the use of the lowest cost form of new generation capacity – wind and solar farms. (15)
- Tom Greatrex of the Nuclear Industry Association says the Government understands the inherent value of a baseload low carbon source of generation. But the National Grid's (NG) Future Energy Scenarios (2016) showed a steadily declining need for 'baseload' generation. By 2030 there will be growing periods when wind and solar meet all projected demand. In fact renewables could soon be producing enough electricity to power the grid from April to October. The capacity of 'firm' inputs (like gas, nuclear, biomass, interconnectors, storage etc) required to operate more than half the year is expected to be reduced to 20GW overall. (16) The dominant need in the majority of National Grid scenarios post 2030 will be for adequate responsive capacity displacing coal and gas, and more efficient approaches to balancing demand and supply. Baseload is not helpful - it simply leads to further overproduction of energy at times when renewables can meet demand on their own. In a grid which has a large contribution from variable renewables, what is required is flexible electricity supply which can be turned on and off quickly to fill the troughs when renewables aren't able to supply. Nuclear power is a very poor fit for a 21st century grid system and acts against increasing renewable energy capacity. (17) Michael Grubb, Professor of International Energy and Climate Change Policy at University College London, told the House of Lords Selected Committee on Economic: *"If you are worried about how to provide power during winter periods when there is a cold dark windless night, you do not want to build a spanking new plant designed to run 100% of the time; you build something that is cheap to construct and expensive to run."* (18) UBS Bank says *"Large-scale power generation ... will be the dinosaur of the future energy system: Too big, too inflexible, not even relevant for backup power in the long run"*. (19)
- A similar argument used by the nuclear lobby is that renewables, particularly wind and solar, are unreliable because of changing weather. Only nuclear power can guarantee to keep the lights on or the air conditioners running. During this summer's heatwave five European countries, Finland, France, Germany, Sweden and Switzerland, had to put nuclear reactors on reduced power or shut them down completely because their cooling water got too hot. The water intake was too warm to cool the plant, and the hot water being returned to the river or sea was killing fish and other wildlife. (20) And Belgium is

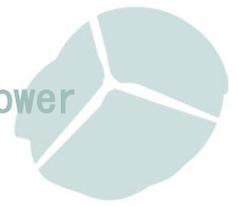


bracing itself for power shortages this winter as it grapples with extended outages at its aging fleet of nuclear reactors. (21)

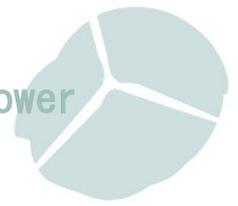
- Jan Vrins, Managing Director at the U.S.-based global consultancy Navigant, who is leading a practice of 600 energy experts, says *“By the time the [UK] nuclear plants are built, the demand for centralized generation may not be there ...distributed energy resources are becoming baseload and central generation is becoming backup. We are seeing a tremendous value shift coming in the next ten years in the energy market ... We have entered a new world in which growth will come from distributed energy resources. That means all the products and services behind the meter: energy efficiency, rooftop solar, EVs, smart meters, home storage, microgrids. Over the next ten years, distributed energy resources will grow 8 times faster than net central station generation. Vrins gives the example of EVs. “If all cars in the UK were EVs, together they will have enough capacity to supply the UK, France and Germany with electricity. It’s an enormous capacity for storage and even for generation. If I drive home from work with my EV, my battery may still be 90% full. Most EV owners will only need to charge once a week. So this becomes an enormously valuable resource.”* (22)
- A recent survey showed 62% of UK households want to install solar panels on their homes, and it’s getting ever cheaper for them to do so. Solar panels have fallen in price by over 99% in the last few decades and are expected to continue falling, with a drop of 18% in the first half of this year alone. Batteries are following a less spectacular but similar trajectory, with a 79% drop for lithium-ion batteries since 2010. (23) Solar will become Europe’s most competitive source of energy by 2020 according to the Sun Investment Group. The elimination of the Minimum Import Price (MIP) will allow solar modules to become up to 30% cheaper. It says the decision to lift trade tariffs on the import of solar panels from China means solar energy will become an even more attractive form of energy to investors, consumers and policy makers and as a result become more widely adopted. (24)
- A new report from the Centre for Alternative Technology (CAT) draws on analysis of over 130 scenarios from around the world that demonstrate how deep decarbonisation or net-zero greenhouse gas emissions can be achieved before the second half of the century using existing technology, whilst also supporting social or economic development. We already have all the tools and technologies we need to achieve the Paris targets. Rather than an unresolved technical challenge, what is actually holding us back is a mix of economic, cultural and psychological barriers. There are 100% renewable scenarios for a wide range of locations, including many of the world’s largest emitters. The diversity of detailed, well-researched scenarios from around the world shows that we have all the tools and technologies we need to move beyond fossil fuels. Most of the scenarios found a decarbonised energy system paid off in the long term compared to Business as usual (BAU). A major contributing factor was the falling price of electricity as renewables with low to zero fuel costs pay off their capital costs and take up more of the energy generation. (25)



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## 2. Moorside on the rocks?

Plans for a new nuclear power station in Cumbria are on the verge of collapsing after the Toshiba-owned company – NuGen - laid off 60% of its workforce and embarked on a final effort to sell the project. Toshiba was due to sell the NuGen consortium to South Korean state-owned firm Kepco in early 2018, as the Japanese firm exits international nuclear projects and looks to recoup some of the £400m it has spent on the Moorside plant.

But Kepco has been delaying a final decision, due in part to the UK government signalling a new approach to financing nuclear power stations. That has forced NuGen to cut 60 of its 100-strong workforce after a six-week consultation with staff. (1)

Unions said the project's problems showed the need for the government to take a stake in Moorside. Justin Bowden, the GMB national secretary, said: *"The looming collapse of this vital energy project has been depressingly predictable for months."* The GMB wants the NDA to be scrapped as it currently exists and a Nuclear Development Agency created to make sure Moorside and the accompanying creation of thousands of new jobs and apprenticeships, goes ahead. (2) The skeleton NuGen team is now focused on clinching a deal with Kepco by the end of the year before Toshiba writes the unit off entirely at the end of March 2019. Success will hinge on whether Kepco buys into a new financing approach for nuclear power plants that the government is exploring, known as the regulated asset base (RAB) model. Officials think it could deliver the government's nuclear ambitions more cheaply for consumers than alternatives.

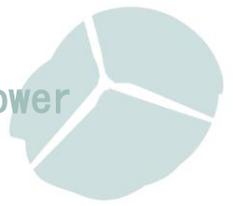
The RAB approach involves a regulator – in the case of nuclear power stations most likely to be Ofgem – setting a fixed sum for the costs of the scheme, and a fixed return for the project's backers. Those returns would be funded by energy bill payers. But the model is likely to be ditched if Jeremy Corbyn comes to power. Alan Whitehead, the shadow energy minister, said: *"Using customers' bills to make a bet that construction of such large and complex projects will not overrun in terms of cost or time is a reckless act."* (3)

The Chief Executive of NuGen said he will *"fight tooth and nail"* to salvage the £15 billion Moorside nuclear power station in an impassioned speech to industry leaders gathered in Cumbria. He says he is fully behind using the RAB model. (4)

The FT reported that Toshiba had entered talks with Canadian asset manager Brookfield over the potential sale of NuGen. Brookfield bought Westinghouse from Toshiba for \$4.6bn in January after the US nuclear business filed for Chapter 11 bankruptcy protection in 2017. (5) But the claims were later rubbished by Toshiba. It added that it was still considering the sale of NuGen to Kepco. (6)

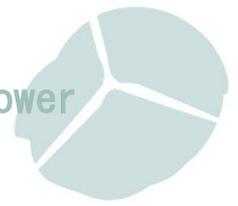
Later NuGen admitted that there are no firm plans to save Moorside. (7)

Workington Labour MP, Sue Hayman, co-chair of the All Party Parliamentary Group on Nuclear Energy, wrote to the Secretary of State for Business, Greg Clark MP, at the end of July, when NuGen announced it was consulting on job losses, calling on him to guarantee Government support for the project and 20,000 future Cumbrian jobs. Mr Clark said in June that he "will consider direct Government investment" in the proposed Wylfa nuclear power station in Wales,



but he has refused to make any similar commitment to Cumbria. In a response to Sue's letter, energy minister Richard Harrington MP said: *"The Secretary of State and I understand the potential importance of the Moorside project to the local area. However (...) the proposed sale of NuGen is principally a commercial matter for Toshiba and it would not be appropriate for me to comment on those ongoing negotiations."* Sue Hayman said: *"This Tory government could not care less about the Cumbrian economy, the Moorside project, or the 20,000 future jobs it will bring."* (8)

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### 3. Hinkley in Paris Court

In September, a court in Paris ordered French utility EDF to release a risk analysis report to the group's works council (CEE) concerning its Hinkley Point C nuclear project. The appeals court in Paris said the firm must communicate the report within a month and must consult the CEE regarding the project within two months.

In 2016, EDF refused to release all documents required by the council for it to be able to issue its advice on the project, triggering CEE's legal action. (1) The CEE say EDF failure to give elected representatives of the staff objective, precise and complete information on the technical and financial issues raised by the Hinkley project meant they had not been able "to give a reasoned opinion on this project". (2)

Commenting on the news, Steve Thomas Emeritus Professor of Energy Policy at Greenwich University and author of "Time to Cancel Hinkley?" (3) said:

*"Some senior EDF management and some EDF trade unions have long been concerned about EDF's participation in the Hinkley Point C project. The 3-year old report the EDF Central Works Council (CCE) has won access to will show that EDF is well aware of these risks. The continuing delays and cost overruns (more than 3 times over budget and 8 years late) at Hinkley's reference plant, Flamanville, significantly worse than when the report was written, illustrate graphically the scale of the risk. The Works Council see Hinkley as a financially risky project that will divert EDF's scarce finances away from the strategically more important task of upgrading and life-extending EDF's fleet of 58 reactors, many of which are at or near the end of the 40-year design life."*

Stop Hinkley spokesperson, Roy Pumfrey says:

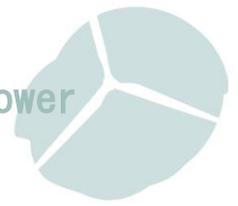
*"Even the long standing nuclear advocate, former International Energy Agency boss, Nobuaki Tanaka, says nuclear power can't compete with renewables. He says it's 'ridiculously expensive' and 'utterly uncompetitive' (4) Electricity consumers would almost certainly still be able to make savings if the project were halted now and the south-west were given the chance to develop sustainable energy industries. Full construction start is still a year or more away so not too late to stop it."*

EDF maintains the official construction-start target date for HPC is "mid-2019" and the "initial delivery objective for Unit 1 at the end of 2025". However, it has acknowledged that pouring the first safety-related concrete in mid-2019 can only happen if "the final design, which is on a tight schedule, is completed by the end of 2018." (5)

#### When is Construction Work not Construction?

The International Atomic Energy Agency (IAEA) states that the construction start date is 'when first major placing of concrete for the base mat of the reactor building is made.' There have been mixed messages from EDF as to when construction will start. This is hardly surprising since the site already looks like something out of Mordor and has done for over a year. (6)

In spring 2018, EDF Energy reported that "construction is now beginning on the pre-stress gallery and the nuclear island foundation or common raft - two key elements of the final nuclear

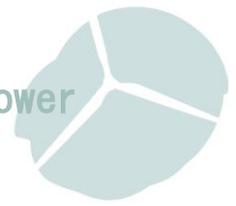


power station structure”. But on 8 June 2018, an EDF Energy spokesperson told the World Nuclear Industry Status Report (WNISR): that “The confusion lies with the fact that the recognised ‘construction start’ has not yet been reached. In the HPC project, this date is termed ‘J0’ and is scheduled to be reached in June 2019”

So officially, the Hinkley Point C reactors are not listed as under-construction, despite, as of August 2016 it was reported that EDF had t already spent £2.5 billion (US\$3.3 billion) on construction and despite the “site construction director” stating in spring 2018 that “activity is ramping up with over 3,000 people now on-site...and over 100,000 tonnes of concrete has already been poured”. (7)

In its most recent statement EDF said that the project was on track to meet its next major milestone in 2019, namely the completion of the 4,500 tonne concrete platform on which the reactor buildings sit. It said Hinkley was on track to come online by the end of 2025. (8)

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## 4. Bradwell Update

China's leading nuclear energy company CGN says it would consider pulling back from control of the Bradwell nuclear plant to appease political sensitivities.

Under a 2016 agreement, CGN would have a 66.5% stake in Bradwell and EDF would have the remainder when it starts generating electricity in the late 2020s or early 2030s. However, CGN's chief executive Zheng Dongshan told the Financial Times (FT) CGN would be willing to consider *"not being the majority operator. We understand the political and local sensitivities"*. (1)

Should the Bradwell project proceed, it would be the first Hualong HPR1000-type reactor. The Office for Nuclear Regulation is currently assessing the reactor design but a final decision on the Generic Design Assessment is expected to take at least three years. (2)

BANNG's Andy Blowers says the project may be doomed anyway as the site is totally unsuitable and is widely opposed by communities all around the Blackwater Estuary. The Chinese withdrawal, should it come, would reflect widespread concerns about the security issues surrounding their investment into a highly sensitive part of the UK's national infrastructure. Recent manoeuvres off the disputed, Chinese-built, artificial islands in the South China Sea have increased tensions in the area and provoked warnings of Chinese investment withdrawal from the UK. It is possible that the Bradwell project could be an early victim of deteriorating relations between the two countries. In any event the project was already looking doubtful. It is facing considerable challenges in delivering vast quantities of cooling water by pipeline and the need to avoid polluting the Marine Conservation Zone which gives protection to the Colchester Native Oyster and other marine life. Most of the site is vulnerable to flooding and it will be a heroic feat to demonstrate that highly radioactive spent fuel can be safely and securely stored on the site until the end of the next century. (3)

The Blackwater, Crouch, Roach and Colne Estuaries were designated as a Marine Conservation Zone in 2013. As part of the designation native oysters have been legally protected indeed there is the Essex Native Oyster Restoration Initiative to further the aims of the MCZ designation. The MCZ designation is a major change in the site status since Bradwell was selected in 2011 as a potential site for power generation by the Government. Despite the new MCZ status CGN and EDF Energy still confirm their belief that Bradwell is a good site for nuclear development. If you take into account this and all the other environmental protections that run along the proposed site you would have thought it would be the last place to build a nuclear power station! (4)

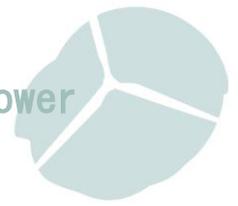
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1. iNews 18th Sept 2018 <https://inews.co.uk/news/business/bradwell-nuclear-plant-essex-china-investors-uk/>

2. FT 18th Sept 2018 <https://www.ft.com/content/1a44e152-b762-11e8-b3ef-799c8613f4a1>

3. BANNG 18th Sept 2018 <https://www.banng.info/news/possible-chinese-withdrawal-from-bradwell-b/>

4. Mersea Island Environmental Alliance 3rd September 2018 <https://www.facebook.com/Stop-Nuclear-Dumping-In-Blackwater-Estuary-1473134316325437/>



## 5. Wylfa Ploughs On

Plans to clear the Wylfa Newydd site now rather than waiting to see if the power station's Development Consent Order (DCO) is approved have been given the go-ahead by Anglesey council. Horizon Nuclear Power will now start the 15-month process to clear an area measuring just over a square mile (740 acres) – the size of 500 football pitches.

But Greenpeace has taken legal action arguing work should not start until Wylfa B is given the official go-ahead. Anglesey council unanimously approved the plans. It could take at least 18 months for the planning inspectorate to decide on the DCO. Planning officials said giving it prior permission would speed up the construction process. Ahead of the council's planning meeting, Greenpeace solicitors launched a legal challenge against the officials' recommendation. The campaigners said the council's report had "mistakenly relied upon the government's Nuclear Energy National Policy Statement as a key justification for their support for Horizon's plan to clear the site". (1)

Greenpeace claims justification for the decision relies too heavily on the government's Nuclear Energy National Policy Statement (EN-6), which expresses government support for nuclear reactors completed by 2025. As the Wylfa site is anticipated to begin operations in 2027 at the earliest, the activist group say it is not applicable under this government ruling, adding that the site clearing process has been conducted with too much haste considering the dubious nature of the project's viability and financing. Greenpeace UK's head of energy Kate Blagojevic said: "*The National Infrastructure Committee has advised the government to focus their energy policy on renewables because wind and solar power are much cheaper than nuclear. The unseemly haste with which parts of Anglesey County Council are trying to rush this proposal through planning is both unlawful and entirely premature given the failure of the project to secure funding.*" (2)

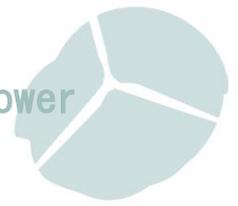
Site clearance will include the clearing of field boundaries, demolishing buildings and "relocating species" some of which are endangered, such as barn owls, bats and great crested newts. The firm promises that the site will be restored to its previous condition if the nuclear plant fails to clear the planning or funding hurdles. The restoration would cost the company more than £7m, and a bond for the costs will be agreed with the local authority before planning permission is formally released. Representatives of north Anglesey community councils and People Against Wylfa B spoke against the bid, urging members to force Horizon to wait until the DCO's outcome is known.

A spokesman for the National Trust said: "*We believe that the plans as they currently stand, along with the premature way the planning application has been brought forward, reinforces our concerns about threats to habitat, wildlife and landscape in the proposed development.*" (3)

Dylan Morgan, a member of People against Wylfa B, said: "*There is no way that Horizon could restore this landscape so it is completely premature to give them permission without knowing whether they will obtain consent to go ahead with the project at all. It's also unclear whether Hitachi can put a financial package together to carry out the construction of two huge and totally unnecessary new nuclear reactors at Wylfa.*" (4)



1. BBC 5th Sept 2018 <https://www.bbc.co.uk/news/uk-wales-45410763>
2. Power Technology 5th Sept 2018 <https://www.power-technology.com/news/greenpeace-objects-wylfa-site-clearance/>
3. Daily Post 5th Sept 2018 <https://www.dailypost.co.uk/news/north-wales-news/wasteland-fears-740-acres-anglesey-15115327>
4. Power Technology 5th Sept 2018 <https://www.power-technology.com/news/greenpeace-objects-wylfa-site-clearance/>



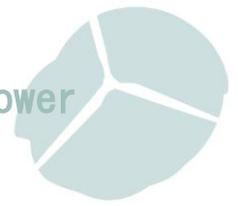
## 6. Sizewell C – a figment of the imagination

In an interview with *The Times* in April EDF Energy's UK chief executive, Simone Rossi, said that rapid progress was needed on the development of Hinkley Point C because promised cost savings would not materialise if there was a significant delay between work on the two. (1)

EDF does not need to strike a deal on Sizewell with the government this year, but Mr Rossi wants to be confident that it will be possible to reach an agreement. "This is the year where we need to understand whether this whole thing is really feasible or not," he told *The Times*. "If we were to conclude that maybe it's not feasible, then at that point maybe we say we are not in a position to continue the project." EDF is pushing for a Regulated Asset Base (RAB) model.

The GMB has been urging a go ahead for Sizewell C because it faces an uncertain future, after the decision in National Infrastructure Commission (NIC) pushed for a reduction in the government's plans for new nuclear power stations. (2)

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1. Times 4<sup>th</sup> April 2018 <https://www.thetimes.co.uk/article/nuclear-site-in-danger-without-deal-on-funding-mfbp6f7cd>
  2. Compelo 27th Sept 2018 <https://www.compelo.com/what-is-sizewell-c/>



## 7. Labour Moves

Jeremy Corbyn told the Labour Conference that a Labour Government would be “*working with unions to ensure jobs and skills are protected as we move towards a low-carbon economy. And working with industry to change the way we build to train the workforce that will retrofit homes and work in the new energy industries too. And I can announce today that our programme of investment and transformation to achieve a 60% reduction in emissions by 2030 will create over 400,000 skilled jobs. Good jobs based here and on union rates bringing skills and security to communities held back for too long. And we will go further, with plans to reduce greenhouse gas emissions to zero by the middle of the century.*”

He continued “*It is ambitious and will be delivered with the most far-reaching programme of investment and transformation in decades. Labour will kick-start a Green Jobs Revolution that will help tackle climate change, provide sustainable energy for the future and create skilled jobs in every nation and region of the UK.*” (1)

Labour's low cost and practical proposals for expansion of onshore and offshore wind, solar power, energy conservation and increases in renewable heat are the surest sign yet that they are the competent choice for Government, according to Dave Toke, reader in Energy Politics at Aberdeen University. He says the proposals need some elaboration, “*but seem to be in a different dimension compared to the Tory Government who seem increasingly certain to be heading for self-destruction on the anvil of Brexit.*”

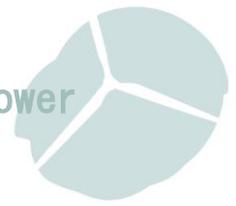
Rebecca Long-Bailey is aiming for 85% of electricity to come from low carbon power by 2030. This is an easily achievable target, says Toke, and will be done at low cost if simultaneously Labour cancels the disaster-in-waiting project at Wylfa, and some way can be found to avoid Hinkley C being built - there's already enough offshore wind in the pipeline to ensure well over 50% of electricity coming from renewables by 2025.

Although some see the target of providing over 40% of heat demand from renewables as being problematic, by promoting municipal green socialism, and the use of industrial heat pumps, which like a lot of other green technologies is one that is declining in cost, Labour could empower local authorities to start up local green energy companies to focus on developing community heating networks to be supplied with heating by industrial heat pumps. (2)

The next Labour government would change the planning system to make it easier to erect onshore wind turbines, reversing a virtual ban imposed by David Cameron three years ago. The policy is set out in a new document called “*The Green Transformation: Labour's Environment Policy*” Labour would support tidal lagoons, ban fracking and invest £2.3bn a year upgrading insulation in 4m properties. (3)

The paper spells out a subtle shift in the party's longstanding policy of getting 60% of Britain's energy from low-carbon sources by 2030. That framework has been shifted so the target is “*within 12 years of coming to power*”.

Labour is still unclear as to what role nuclear power would play under a government led by Jeremy Corbyn, a past critic of the nuclear industry. Labour's paper suggests greater use of



*“local, micro grids and batteries”* to store renewable energy. However Ms Long-Bailey said nuclear would be part of the plan. *“I would state quite firmly that we have to recognise that nuclear will form part of the mix, going forward.”* (4)

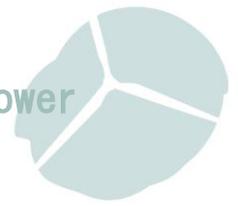
And co-author of the paper is Shadow Secretary of State for Environment, Food and Rural Affairs Sue Hayman, who is also co-chair of the All Party Parliamentary Group on Nuclear Energy and has recently been pushing for a go-ahead for Moorside.

Nuclear power is notable by its complete absence from the pamphlet, says *Business Green*, while there is also no mention of the carbon floor price, the coal phase out, or carbon capture and storage. There is a surprising failure to emulate the Scottish government and propose a new Just Transition Commission, and little new thinking on how to accelerate the shift to electric vehicles. (5)

On how its plans for public ownership of the energy industry might work, Shadow energy minister Alan Whitehead says it certainly doesn't mean a mass buy-back of existing energy generation kit, much of which is reaching the end of its natural life. But he sees scope for the new breed of council-owned energy companies to widen their remit beyond energy supply to more vertically integrated arrangements, embracing distribution, transmission and potentially even generation. Changing the time-limited nature of licensing arrangements may also be on the cards. This is the point where Labour's wider public ownership push and Whitehead's oft-stated passion about decentralisation of the energy system link up.

A key element of Labour's proposals on energy is to bring 'the UK's energy transmission and distribution networks back into public ownership'. Labour's shadow Chancellor John McDonnell was clear in his speech to the conference that this would not be about the state ownership of the 1970s, saying: *“Be clear, nationalisation will not be a return to the past. We don't want to swap one remote manager for another.”* Instead, he announced that the Labour Party setting out plans that would put it in the hands of councils, workers and customers. For networks, the role of consumers in ownership is particularly important in this vision, says Matthew Lockwood of Exeter University.

A good example of this is district heating networks in Denmark, many of which are owned by consumer cooperatives, and set up as not-for-profit organisations. Because they are owned by consumers, they have an incentive to minimise or reduce costs and no incentive to try to conceal true costs. In a belt-and-braces arrangement, district heating companies are also regulated by the national energy regulator DERA, who provides data on all schemes across the whole country to allow comparison, so that consumers in each scheme can put pressure on managers to deliver good results. Where consumers want to, they can set prices so as to generate surplus revenue, but the non-for-profit requirement means this must be ploughed back into investment and innovation. While some might be surprised that a sector dominated by small not-for-profit companies would produce it, Danish district heating has been highly innovative from a technology and operational point of view, with major improvements in efficiency and control of systems over the years. (7)



1. Jeremy Corbyn's Conference Speech 28<sup>th</sup> Sept 2018 <https://labour.org.uk/press/jeremy-corbyn-speaking-labour-party-conference-today/>
2. Dave Toke's Blog 27<sup>th</sup> Sept 2018 <http://realfeed-intariffs.blogspot.com/2018/09/labours-green-energy-plans-are-surest.html>
3. The Green Transformation, Labour's Environment Policy. <https://www.labour.org.uk/wp-content/uploads/2018/09/The-Green-Transformation-.pdf>
4. FT 22<sup>nd</sup> Sept 2018 <https://www.ft.com/content/4952ecca-bda5-11e8-94b2-17176fbf93f5>
5. Business Green 24<sup>th</sup> Sept 2018 <https://www.businessgreen.com/bg/news-analysis/3063285/labour-vows-to-be-the-greenest-government-ever>
6. Utility Week 14<sup>th</sup> Sept 2018 <https://utilityweek.co.uk/interview-alan-whitehead-labour-shadow-energy-minister/>
7. IGov 27<sup>th</sup> Sept 2018 <http://projects.exeter.ac.uk/igov/new-thinking-the-peoples-energy-networks/>