

Site Stakeholder Group Report

Peter Evans, Hinkley Point B Station Director
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EDF Energy Nuclear Generation Limited
Hinkley Point B Power Station
Near Bridgwater, Somerset, TA5 1UD

T: +44 (0)1278 654600
F: +44 (0)1278 654610
www.edfenergy.com

Registered office: Barnett Way, Barnwood
Gloucester, GL4 3RS. Registered in England
and Wales number 3076445.

1. Safety and station issues



On behalf of the team at Hinkley Point B, thank you for giving me the opportunity to present my report and operational update.

Hinkley Point B has made a good start to the New Year, both in terms of our safety performance and generation. The station has not suffered any top tier safety events since the last meeting of the site stakeholder group, and both units generated continuously during the reporting period, until reactor 4 was taken off line last week to begin a planned graphite inspection outage.

We measure our safety performance against top tier indicators and I am pleased to report that it has been over thirteen years since the last Nuclear Reportable Event at the power station, and over ten years since the last environmental event. This fleet leading performance is comparable to some of the best performing nuclear power plants in the world. We recently passed the fourth anniversary since the station's last lost time incident to a member of staff, although as reported at our October meeting, 2019 disappointingly saw two lost time incidents to the site's contract partners. The first involved an individual being knocked by an open door of an electric vehicle, and the second occurred after a fencing contractor operative sustained a fractured tibia after being struck by the rear blade of an excavator. Detailed investigations have been carried out into the two accidents with learning points identified. I am pleased to report both individuals are expected to make full recoveries, with one already returning to work before Christmas.

Since our last meeting, there have been three minor first aid injuries at the site, all of a very minor nature.

In January 2019 Hinkley Point B reached a significant output milestone after generating its 300th terawatt hour of low-carbon electricity. The station first started operating in February 1976, and 300 terawatt hours represents enough electricity to power all homes in the UK for almost three years. During that time, it has avoided the production of 105 million tonnes of CO₂e – the equivalent of removing all cars from our roads for one and a half years. As a result the station also now holds the unique record of generating more low carbon electricity than any other UK nuclear power station. Achieving 300 TWh is a fantastic achievement and the fact we now top the generation league really signifies the huge contribution Hinkley Point B power station has made to low carbon generation in the UK over the years. I would like to pay tribute and personally thank the staff, contract partners, and central support functions, both past and present who have all played a part in the power station's ongoing success.

Reactor 3 / turbine 7 has been on-line since 16 June 2019, and operated at nominal full power throughout the reporting period, apart from short load reductions for refuelling activities.

After 366 days of safe and continuous operation, reactor 4 was safely shutdown on Friday 21 February for a planned maintenance and graphite inspection programme. As always, this outage has been planned in advance with the National Grid to ensure that there is no impact on the national electricity supply. We have decided to take more time to complete this outage to allow for additional analysis and review of the reactor core inspection findings, which as always we will share with the Office for Nuclear Regulation. Based on our current best estimate, reactor 4 will return to service in early June. Similarly, our planned reactor 3 maintenance and graphite inspection programme which is

scheduled to begin on 24 April, will run until late June 2020. I will of course update you on how we get on at the next site stakeholder group meeting.

Station output for the period between 14 October 2019 to 16 February 2020 was 2.796 TWh (one terawatt equals 1,000,000 megawatts: one terawatt-hour represents one hour of electricity consumption at a constant rate of 1TW).



At the end of January, Tommy Banner from chart topping band The Wurzels, played a starring role as the station played a part in the launch of EDF's new charity partnership with Prostate Cancer UK.

Tommy, who was diagnosed with prostate cancer back in 2005, visited the station and spoke to staff and contract partners about his personal battle with the disease and the importance of early diagnosis.

On the launch day, I joined other station workers in a 90-minute charity sponsored static row, and I am pleased to report we have already raised £3,000 for the popular charity. Prostate cancer has

touched so many lives, and during the three-year charity partnership, as well as fundraising, we will also be raising awareness about the condition.

During the reporting period, I also had the pleasure of welcoming ministers from the Department for Business, Energy and Industrial Strategy (BEIS) to the site. Kwasi Kwarteng, MP, Minister for Business, Energy and Clean Growth, and Nadhim Zahawi, MP, Minister for Business and Industry, visited Hinkley Point B and Hinkley Point C, and took part in a site tour and met with apprentices.

2. Environmental update

At the end of 2019, the gas bypass plant (GBP) was isolated from the primary circuit on both reactor 3 and reactor 4 in order to facilitate valve repairs to the charge machine emergency cooling (CMEC) system. Once completed the GBP was reconnected to the primary circuit on both reactors. The function of the GBP is to maintain the chemistry of the primary coolant within strict parameters, including the removal of moisture. In reconnecting the reactor 3 GBP, the moisture levels increased requiring it to be re-isolated to allow the source of the moisture to be identified and removed.

Subsequent investigations identified the issue as a blockage between the pressure drains tank and the atmospheric break tank. The blockage was removed, and when returning the GBP dryers and primary circuit to normal conditions, it was necessary to complete one discharge of 130Te (November) and another of 120Te (December) of CO₂ into the atmosphere. These blowdowns were completed in a controlled manner and through the use of best available techniques (BAT) to minimise the quantity and impact of the discharges. As a result, Hinkley Point B exceeded the Quarterly Notification Level (QNL) for gaseous discharges of Carbon-14 (C-14) for November and December. In addition, the prolonged GBP outage on reactor 3 has led to an increased C-14 specific activity within the associated primary circuit, and therefore the station expects to remain above the QNL until June 2020. At no time was there any

threat to power station workers, members of the public, or the local community. The additional dose to the environment has been assessed as 0.5 micro Sieverts over the course of the preceding 12 months. This dose is equivalent to eating one Brazil nut. The Environment Agency has been informed of the circumstances surrounding the event, and has been updated throughout.

A full investigation has been carried out to determine the root and contributing causes and to prevent a repeat occurrence. The investigation identified a defective level indication on part of the moisture removal plant as the root cause. This issue represents a non-compliance of the Radiological Substances Regulations permit, as the level indication was not maintained in good repair.

No other events of environmental significance were recorded during the reporting period. As per normal process, all events on site that are of interest environmentally are recorded and trended to determine the potential for improving our business activities.

Environmental enhancement works continue at the power station, and during the reporting period we have completed a significant investment project within the on-site radiochemistry laboratory. We have also replaced a section of oil transfer pipework on the reactor 4 gas circulators, which will make it easier to inspect and has secondary containment.

Management of solid radioactive waste and the reliability of environmentally sensitive plant has surpassed the stretching targets set at the start of 2019.

3. Emergency arrangements

Since the last site stakeholder group meeting, the station completed the fourth of the five 2020 shift exercises – *Exercise Blue*. This was a radiological based scenario involving the simulation of an out-of-hours response.

The 2020 Level 1 exercise is planned for Tuesday 29 September, and the security counter terrorism demonstration is planned for Wednesday 24 June. Another peer-assessed exercise will take place on Friday 12 June.

There is increased focus on the preparation of a Beyond Design Basis (BDB) demonstration exercise in 2021. This will involve the deployment to Hinkley Point B of some of the equipment strategically positioned in depots around the UK, and which could provide a response to a significant event that is beyond the initial capability of the site. There is a lot of emphasis in training on this equipment during 2020 for our standby teams, and every emergency scheme member is undertaking a refresher of the whole BDB process.

Focus is also being maintained on efforts to secure role resilience for key emergency scheme roles. There has been a concerted effort on this during the past year and this has resulted in a number of newly qualified personnel in roles throughout the organisation. As some staff move onto the Hinkley Point C project, this effort is being enhanced to ensure emergency scheme roles are not impacted by these demographic changes.

During the reporting period, there have been two occasions when an ambulance has been called to site. The most recent being on 10 January after a staff member was taken ill at work. There has been no attendance from either the Police or Fire brigade to site in the period.

Three EDF employees from Hinkley Point B power station have been recognised by The Royal Humane Society after saving a colleague's life. Mark Williams, Connor Keirle and Aaron Tyrrell, each received prestigious resuscitation certificates from the Society, after their quick thinking and skill helped save the life of fellow EDF colleague Ross Perkins after he suffered a near fatal heart attack at work. Ross has now fully recovered and two months after the heart attack he returned to work as a Materials Controller at Hinkley Point B.



4. Production statistics

For the period Monday 14 October 2019 to Sunday 16 February 2020:

TWh (terawatt-hour) Production:

- > Reactor 3 1.416
- > Reactor 4 1.380

Unit Capability Factor (% load factor) is based on a rated unit power (RUP) of 485 GNN (Gross Net Net) for reactor 3 and 480 GNN for reactor 4.

- > Reactor 3 99.48% excluding planned shutdowns and refuelling
- > Reactor 3 96.56% no allowance for planned events
- > Reactor 4 99.33% excluding planned shutdowns and refuelling
- > Reactor 4 95.05% no allowance for planned events

Number of channels re-fuelled on both units: 34 plus 11 shuffled channels.

Number of flasks despatched: 8

(Source: station records.)

I have once again included some simple descriptions and definitions about the general output and generation terms we use. I hope the following paragraphs bring some extra clarity.

The terms power and energy are frequently confused. Power is the rate at which energy is generated or consumed and is measured in units (e.g. watts) that represent energy *per unit time*. For example, when a light bulb with a power rating of 100W is turned on for one hour, the energy used is 100 watt hours. This same amount of energy would light a 40-watt bulb for 2.5 hours, or a 50-watt bulb for 2 hours.

Power stations are rated using units of power, typically Megawatts or Gigawatts. This reflects the maximum power output it can achieve at any point in time. A power station's annual energy output, however, would be recorded using units of energy (not power), typically Gigawatt hours. Major energy production is often expressed as Terawatt hours for a given period of time, and the case of SSG reporting this period is typically four months. One Terawatt hour of energy is equal to a sustained power delivery of one Terawatt for one hour.

Kilowatt	-	1,000 watts
Megawatt	-	1,000,000 watts
Gigawatt	-	1,000,000,000 watts
Terawatt	-	1,000,000,000,000 watts

5. Community relations

Site visits

Since the last meeting the station has hosted a variety of organised external group visits, including representatives from Backwell School – Bristol, Beaminster School, Bridgwater & Taunton College, Exeter College, Heathfield Community School – Taunton, Hugh Sexey School – Cheddar, King Henry VIII School – Wales, Millfield School – Street, Parkfield Primary School - Taunton, Sidcot School, Somerset Chamber of Commerce, South Devon College, University of Bristol, University of Wales Trinity St David, University of Warwick, University of the West of England and Weston College. Each group received presentations on EDF Energy, Hinkley Point B and nuclear power at the visitor centre before being taken on a guided tour of the site.

2019 community activities

Hinkley Point B continues to play an active role in the local community. Here are some of the activities the station has been involved with in 2019:

- During the year, we welcomed 21,597 people into our visitor centre in Bridgwater, bringing the overall footfall for the centre since it opened in December 2012 to 116,343 people.
- We hosted 141 organised group visits to Hinkley Point B during the year, with 2,057 people touring the power station. Since the visitor centre opened, over 20,000 people have taken the opportunity to visit the power station.
- Back in May 2019, our visitor centre team played an active part at the popular Royal Bath and West Show and engaged with over 19,000 people.
- Station staff and contract partners raised over £10,000 for charities and good causes with beneficiaries including: Breast Cancer Now and Elliot's Touch. Over the last nine years, station staff and contract partners have raised over £128,000 for charities and good causes through fundraising activities.
- EDF continues to support local charities and organisations, and 30 groups benefited from the station's sponsorships and donations process in 2019.

The EDF visitor centre will be moving later this year from Bridgwater's Angel Place Shopping Centre, to Cannington Court. I will keep you updated with the transition as plans progress throughout the year.

6. Staff

- > 515 full-time EDF Energy employees
- > 11 EDF Energy apprentices plus 9 ex-Horizon apprentices
- > 11 agency staff
- > 200 full-time contract staff

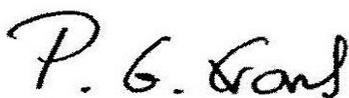
7. Company news

EDF acquires Pivot Power

EDF Group has bought a British start-up 'Pivot Power', which specialises in battery storage and infrastructure for electric vehicle charging. This move will allow EDF, already the largest low carbon electricity producer in the UK, to become a leader in battery storage.

EDF acquires Pod Point

EDF has acquired the majority share of Pod Point, a British start-up and one of the country's largest EV charge point companies, in a joint deal between EDF and financial services company, Legal & General (L&G). L&G is a former investor in Pod Point and will now take a 23% stake in the joint venture. The acquisition is EDF's largest investment in EV technology in the UK. Pod Point's charge points will help EDF provide a market-leading electric vehicle to make it easier for drivers to switch from petrol to electric. EDF already has a Go Electric EV tariff for domestic customers and a range of offers for business customers.

A handwritten signature in black ink that reads 'P. G. Evans'.

Peter Evans
Hinkley Point B Station Director