

Hinkley Point B Power Station Site Stakeholder Group Report



Mike Davies, Hinkley Point B Station Director
24 June 2022

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.

The next month is very symbolic and defining in the history of Hinkley Point B. In fact, this is the last Site Stakeholder Group meeting with both reactors on-load, as after 46 years of generating zero carbon electricity in the South West, the station will very shortly be shutting down both reactors for the final time. Reactor 4 is due to be shutdown on Wednesday 6 July at 10:00 hours, and Reactor 3 will closely follow on Wednesday 1 August at 10:00 hours. This will bring to an end 60 years of nuclear electricity generation in the South West until Hinkley Point C starts up in a few years.



Even though we have been planning for this for many months now, there will undoubtedly be some sadness when the day finally comes. I am sure some will shed a tear when the turbines wind down on their respective shutdown dates; however, we still have so much to be proud of. Hinkley Point B is the oldest and most productive nuclear power station in the UK, and we have made a massive contribution to the country's energy needs over the past six decades.

As reported in May, we moved back the original end of generation dates for both reactors following some unexpected plant shutdowns. You will recall we set these dates based on calculations of the impact of ongoing generation on the reactor cores. However, while writing the safety case to justify these operations we built in some margins as a contingency, which would allow us a little extra generation time in case of such scenarios – see shutdowns below.

I mentioned the double reactor shutdown during *Storm Eunice* at our February meeting. Following the required grid washing activities to remove the salt and other dust sediment from the electrical insulators caused by the wind, reactor 3 was returned to service on Friday 25 February and reactor 4 was returned to service on Wednesday 2 March.

We also had two short unplanned automatic shutdowns on reactor 3 following faults with flexible control fluid hoses on the turbine. The first shutdown was between 5 March and 10 March, and the second shutdown between 7 May and 14 May. Following a thorough investigation, the faults were traced to crimping arrangements on the flexible hoses, and we subsequently identified and replaced other hoses which could have developed a similar fault.

Station output for the period between 13 February 2022 and 12 June 2022 was 2.305 terawatt hours (TWh). A terawatt hour is a measurement of electrical energy consumption and is equivalent to a trillion watts consumed in one hour. After generating over 310 TWh of electricity, we have now started generating our final ever terawatt of electricity before shutdown.

As we transition into the next phase of the power station's operational life of defueling, our safety performance continues to be fleet leading in some areas and comparable to some of the best performing nuclear power plants in the world. There have not been any top tier safety events at the power station since the last meeting, and it has now been over 15 years since our last Nuclear Reportable Event, over six years since the station's last lost time incident to a member of staff, and over two and a half years since the last lost time incident to a contract partner. Since the February meeting, there have been six minor first aid injuries at the site, all of a very minor nature.

We are doing everything we can to ensure we have a smooth transition into defueling, and we are continuing to work very closely and engage with our staff and trade unions about our defueling plans. We have spoken to all of our employees on an individual basis about their aspirations for the future, and I am pleased to report all employees who want to remain at Hinkley Point B for defueling will do so. There will not be any compulsory redundancies.

We are also actively preparing the plant for defueling, and following the final shutdown of reactor 4 on Wednesday 6 July, we immediately start a pre-defueling outage (PDO) on the unit. The outage is expected to last for approximately 10 weeks, and the purpose of this PDO is to fulfil regulatory requirements, implement mandatory defueling safety cases work and to undertake maintenance to maximise plant reliability, for safe and continuous defueling operations through to Fuel Free Verification (FFV). An additional 180 contract partners will help us with this work programme, and this compares with up to 1,200 extra workers who used to support us with our normal statutory outages. We have 3,500 planned tasks to complete during the PDO, and again this compares with 12,000 tasks which we have typically seen previously during our statutory outages.

During the reporting period and as we edge ever closer to end of generation, the station executive team have been privileged and proud to welcome a number of VIPs to the site. Visitors have included: Simone Rossi - EDF Chief Executive Officer, Energy Minister - Greg Hands, MPs from the Nuclear All Party Parliamentary Group (Virginia Crosbie – MP for Ynys Môn, Bill Esterson – MP for Sefton Central, Chris Green – MP for Bolton West & Atherton, Suzanne Webb – MP for Stourbridge, and John Whittingdale – MP for Maldon), and Dr Thomas Waite – Deputy Chief Medical Officer for England

In the past month we have also held two special open days for Hinkley Point B workers and their families. Over 380 people attended, and due to the demand, a third event will be held in July. A great time was had by all, and following a site tour, families indulged in the refreshments available and took part in a *Ping Pong Pants* challenge for Prostate Cancer UK. There was also an opportunity to see at

first hand one of our fire appliances, some of our Civil Nuclear Constabulary (CNC) vehicles, and one of our new fuel flask transporters.

Talking about site visits, I am really looking forward to inviting and welcoming Site Stakeholder Group members to the station on Friday 22 July (10am to 1pm). More information will follow after the meeting.

2. Environmental update

Following on from the generator transformer 7 event on 19 August 2021, a number of enhancements have been implemented to improve the sump defences in the event of an oil loss. Additionally, the emergency response procedures are now more robust and include time at risk indicators with respect to fire water management. The damaged transformer phase tank has now been drained and is in the process of being stripped down to component parts ready for recycling by specialist contractors.

As the station transitions into defueling, we are looking into hazard reduction of oils and chemicals on site to support our COMAH (Control of Major Accident Hazards) commitments. This aligns with the expectations from our last regulatory inspection.

No events of environmental significance were recorded during the reporting period. As per the normal company process, all events of environmental interest are recorded and trended to determine the potential for continually improving our operational activities.

On another note, I am pleased to report back in May four Peregrine Falcon chicks hatched at the power station, on a purpose built nesting platform high up on the reactor building. We put the platform up onsite more than 20 years ago and over the years the pairs that have tried to nest there have had mixed fortunes. Until now we have never had a successful breeding pair, but I am delighted to say three of the tiny birds have fledged the nest, with the fourth being safely cared for at RSPCA at Taunton after falling out of the nest.

3. Emergency arrangements

The 2022 shift training exercise season is now complete, and despite the challenges presented by the pandemic, the station has completed two exercise seasons within 11 months. The only exception is this year's Level 1 Emergency Exercise, which we sensibly moved from the original date of Wednesday 6 July to Thursday 13 October, after we revised our end of generation dates. We also successfully completed our security demonstration exercise back in April, and this was rated Green (adequate) by ONR - CNSS, (Office for Nuclear Regulation – Civil Nuclear Safety and Safeguards).

Since the February meeting, there have been two ambulances called to site - one for an individual who was taken unwell at work, and the other as a precautionary measure for an individual who sustained a minor electric shock after resting a clipboard on a metal structure. I am pleased to report both have made full recoveries and have since returned to work.

A small fire occurred on a distilled water pump in the turbine 7 basement on 5 April. An individual working close by, discharged a single CO₂ fire extinguisher onto the affected area, and immediately extinguished the fire. In line with our emergency arrangements, one appliance from Devon and Somerset Fire and Rescue Service attended site as a precautionary measure, and confirmed the fire was out. Nobody was injured during the event, and no adjacent plant damage occurred. Even though it is extremely disappointing the fire occurred in the first place, the rapid response and actions from the station organisation in both discovering and extinguishing the fire were absolutely superb, and I would like to express my thanks to all involved. The fact the fire did not cause any other damage to adjacent parts of the plant is testament to the high housekeeping standards in the affected area. A full investigation was carried out, and the cause traced to an electrical fault.

Even though all national Covid-19 restrictions have been lifted in England, we still continue to monitor levels of any confirmed cases of infection in the station workforce. The station's response is still being managed in the same methodical and controlled way as it has been since the Pandemic began, and we have not seen any evidence of workplace transmission at the site. The station is currently in a position of *Reactive Readiness*, which means it is business as usual, with contingencies ready to deploy should further control measures be needed in the future, i.e., the appearance of a new variant more resistant to vaccines.

4. Production statistics

For the period 13 February 2022 to 12 June 2022, TWh (terawatt-hour) production:

- > Reactor 3 1.111
- > Reactor 4 1.194

Unit Capability Factor (percentage 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 84.37% excluding losses from planned shutdowns and refuelling
 - > Reactor 3 79.51% no allowance for planned events, including refuelling
 - > Reactor 4 89.85% excluding losses from planned shutdowns and refuelling
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- > Reactor 4 86.35% no allowance for planned events, including refuelling

Number of channels re-fuelled on both units: 24 plus 14 shuffled channels. The last ever planned refuelling campaigns took place on reactor 3 over the weekend of 21/22 May 2022, and on reactor 4 over the weekend of 23/24 April 2022.

Since the station first synchronised back in February 1976, as part of our refuelling operations 2,460 fuel assemblies have been loaded into the two reactors, comprising 19,680 fuel elements made up of 708,480 fuel pins.

Number of flasks despatched: As part of our defueling preparations, we have been making optimisation enhancements to our fuel flask infrastructure to safely meet the demands of increased flask traffic associated with enhanced defueling. The flask hall and corridor are being modified and we are increasing the number of multi-purpose flask processing bays from one to three. This work has meant we have not despatched any fuel flasks to Bridgwater Rail Head throughout the reporting period.

In addition, we have taken delivery of four new fuel flask transporters to help the station with the enhanced defueling and fuel despatch arrangements.

On 24 May we identified a maintenance schedule activity relating to a RADOS whole body monitor on the charge hall, which had inadvertently been missed due to a process anomaly. As soon as the issue was identified, it was immediately rectified. This event was rated as level 0 on the International Nuclear Event Scale (below scale and of no safety significance). Events on a nuclear site are rated according to the International Nuclear Event Scale (INES), which is rated from 0 to 7, with 7 being the highest.

5. Staff

- > 469 full-time EDF employees
- > 8 ex-Horizon apprentices
- > 19 agency staff
- > 200 full-time contract staff

6. Community relations

Sponsorship and Donations

EDF continues to support local charities and organisations. Since the last meeting, local beneficiaries have included:

- > Spaxton Flower Show Society (a donation to cover the hire costs of trestle tables for the 2022 Flower Show)
- > Chedzoy Fair Share Project (a donation to cover the costs of bird boxes for the village)
- > Bridgwater Wolves Football Club (the sponsorship of an annual children's football tournament)
- > Bridgwater Guy Fawkes Carnival (the sponsorship of the 2022 event's grandstand tickets)
- > Cancer Research UK (a donation in memory of Sally Ramsey)
- > Love Musgrove (a donation in memory of Tony Davie)
- > British Heart Foundation (a donation in memory of Danny Nicholls)

Charities, community and non-for profit groups who wish to apply for support from Hinkley Point B's Sponsorship and Donations groups should contact Dave Stokes at dave.stokes@edf-energy.com.

Charity fundraising

Staff and contract partners at Hinkley Point B are continuing to raise money for EDF's charity partner, Prostate Cancer UK. Currently the power station lie in first place in the EDF fundraising league after raising and banking £38,383 for the popular charity. Since EDF launched its four-year partnership with Prostate Cancer UK back in January 2020, the company has raised over £415,853.

Back in April, we also raised £851 for the United Nations High Commission for Refugees from a turnstile collection, following the desperate and sad events in Ukraine.

A handwritten signature in black ink, appearing to read 'Mike Davies', with a long, sweeping underline.

Mike Davies
