



Site Stakeholder Group

Hunterston B Station Director's Report

Period: August to October 2017

1. Safety and Environment

Statutory Outage

Both reactors at Hunterston B power station are generating electricity again after one of the units successfully returned from its statutory outage. The reactor was offline for a nine week maintenance period.

During the outage workers carried out more than 10,000 separate pieces of work, each carefully planned during the last two years of preparation, including inspections of a range of systems including the boilers, electrical systems and the graphite core. The biggest projects included replacing three low pressure turbine rotors and the main generator electrical rotor.

The Office for Nuclear Regulation was satisfied with the results of our tests and inspections and has granted permission for start-up. The unit started generating electricity again on 13 November.

Hunterston B power station has generated low carbon electricity since 1976 and provided enough electricity in 2016 to power almost 2 million homes.

Station Industrial Safety Performance

Hunterston B has maintained its excellent safety record during the reporting period. This is particularly notable given the increased number of workers on site during the statutory outage.

There were no lost time incidents (LTI), medical treatment or restricted work injuries reported by EDF Energy or contract partner staff during this period. The Total Recordable Injury Rate (TRIR) is currently 0.52.

It has been 3374 days since the last EDF Energy LTI and 3362 days since the last Contract Partner LTI at Hunterston B. That is more than nine years.

There were no industrial Very Significant Incidents or Serious Incidents reports in this period.

During the outage period staff and contract partners have worked more than 695,000 hours with no significant safety related events.

The outage safety performance is the best ever achieved, with only two very minor first aid incidents, zero safety rules events & no fire ignition events.

Throughout this period we have seen excellent engagement and team work coupled with high standards of nuclear professionalism and accountability which have helped us to achieve a remarkable safety performance.

As we continue on our journey to zero harm, we will continually try to improve on our performance.

Environmental Safety

There have been no significant environmental events in the period.

Radioactive gaseous and aqueous discharges arising from normal plant operations remain at levels well below those authorised by SEPA. By agreement with SEPA we continue to report in accordance with the recently revised authorisation requirements.

Work to process and package solid low level wastes has continued in the period as part of normal operations and consignments have been made to Cyclife.

The programme of off-site environmental monitoring and radiation surveys in the district has continued as normal and demonstrates that the radiological discharges from the station have a negligible impact on the local environment. Reports are made quarterly to SEPA, detailing the samples and results of analysis performed.

Radiological Protection

The radiation dose of each worker is assessed individually by an electronic personal dose meter. A computer database keeps records for each worker. Exposure is constantly monitored and ultimately compared with the levels specified in the Ionising Radiation Regulations 1999 which is the UK Health and Safety legislation that applies to work with radiation.

Collective dose is planned each year on the basis of the work expected to be carried out through scheduled maintenance, outages and routine operations. The collective dose during the reporting period was above plan (see table below).

Differences between the actual and planned dose can be down to a range of factors including changes in work planning or radiological conditions slightly different than expected. Despite the dose for this reporting period being over, the Year-To-Date the collective dose is under plan at 91.5%. A breakdown of dose received is shown below (along with a comparison of relevant dose statistics).

All work is fully reviewed and justified in order to ensure all doses received were ALARP (As Low As Reasonably Practicable). This involves justifying and optimising the dose, as well as remaining within those dose limits.

There were no reportable radiological protection events during this reporting period.

Radiation Dose to workers (Aug 2017 - Oct 2017)		
Planned collective dose	18.0man.mSv	
Actual collective dose	22.4man.mSv	
	Employee	Contract Partner
Total Dose	12.20man.mSv	10.23man.mSv
Average individual dose	0.03mSv	0.02mSv
Highest individual dose	0.72mSv	0.53mSv
Individuals	436	603

Chest X-ray	Transatlantic Flight	CT scan	Average UK annual dose to public	EDF Energy Dose Restriction Level	UK legal dose limit for radiation workers
0.014mSv	0.08mSv	2.0mSv	2.6mSv	10mSv	20mSv

Explanatory notes:

- mSv: milliSieverts (SI unit of dose received by an individual)
- man.mSv: The collective dose for a group of workers (i.e. the total of the doses received by each member of a group).

Emergency Arrangements



The station's emergency preparedness team recently teamed up with the visitor centre guides to host three visits by representatives from organisations that would support EDF Energy's emergency response by either attending the station or the Strategic Coordination Centre in Prestwick.

Representatives from the local council, Scottish Government and Police Scotland attended. They were

shown around the station by the tour guides then visited the Access Control Point and Emergency Control Centre.

The feedback has been very positive. Attendees said they found it very useful to their understanding of the station and the emergency arrangements and more visits will be arranged next year.

2. Generation

Month/Unit	R3/TG7	R4/TG8
Aug	<ul style="list-style-type: none"> The unit was operational throughout the month 22-25: Power was reduced for low-load refuelling 	<ul style="list-style-type: none"> The unit was operational throughout the month.
Sept	<ul style="list-style-type: none"> The unit was operational throughout the month 	<ul style="list-style-type: none"> The unit operated until 8 Sept when it was safely shutdown for its planned statutory outage.
Oct	<ul style="list-style-type: none"> The unit was operational throughout the month 17-19: Power was reduced for low-load refuelling 	<ul style="list-style-type: none"> The unit was offline throughout the month for its planned statutory outage

3. Company Update

Vincent de Rivaz CBE has stepped down as Chief Executive Officer of EDF Energy after nearly 16 years in charge; he will be succeeded by Simone Rossi.

Simone was until recently Senior Vice President of EDF's International Division based in Paris, after serving in London as Chief Financial Officer of EDF Energy from 2011 to 2015.

EDF Group Chairman and Chief Executive Officer Jean-Bernard Levy said: "I thank Vincent warmly for his outstanding contribution to EDF throughout his remarkable career.

"Under his leadership, EDF Energy has grown to be the UK's largest generator of electricity, supplying more than 65TWh of low carbon nuclear electricity in 2016. The landmark Hinkley Point C project is now fully under way, and Vincent leaves the company in a strong position for future success.

"Under Simone's leadership, EDF Energy will be tackling some of the most significant opportunities and challenges associated with assuring Great Britain's future needs for energy in the low carbon economy."

EDF Energy is the UK's largest producer of low-carbon electricity, and supplies electricity and gas to millions of residential and business customers. It is a wholly-owned subsidiary of the EDF Group.

4. Station News

Management Team Changes

There have been some temporary changes to the Management Team at Hunterston B. Colin Weir has taken on the role of Chief Nuclear Officer for the regional business which includes Hunterston B and two other stations until the end of the year. The previous holder of this post has moved to take up the role of Technical Director with the Hinkley Point C project.

Paul Forrest, who has been Plant Manager at Hunterston B since 2011, has been appointed as Station Director on an interim basis. Engineering Manager John Sandford will cover Paul's duties as Plant Manager until Colin Weir returns to post.

These changes came into effect at the start of November.

Safety Video Success during Hunterston B Maintenance Outage

Hunterston B power station has worked with a local community organisation to ensure safety on site during its maintenance outage.

The EDF Energy station teamed up with Ayr-based Moving Arts Scotland CIC, to create a new virtual reality training video.

More than 1120 people took part in the training before the recent statutory outage began. The video showed a day in the life of a maintenance technician and gave participants the chance to spot hazards and identify good practice in the workplace.

Acting Station Director, Paul Forrest, said: "It was great to be able to work with a local social enterprise to make this virtual reality video. As well as giving us a really important training tool it has allowed us to develop new links in the Ayrshire community and support a really worthwhile organisation."

"We had an additional 450 workers join the team here for the outage period and as a responsible operator we needed to make sure they were well equipped to stay safe while on site. The team have successfully carried out more than 10,000 separate pieces of work over the past nine weeks. The virtual reality video has had really positive feedback from workers and, as part of our wider safety drive, has helped to make this a really successful maintenance period."

Moving Arts Scotland CIC is a social enterprise based in Ayr High Street. It aims to use the arts and media to help alleviate some of the challenges faced by people in the area by creating well paid jobs and helping students start new businesses. Moving Arts Scotland works with Ayrshire College and University of West of Scotland to offer work experience and paid internships to students. They then use their skills to help communities across Ayrshire and beyond.

Robert Jacobs from Moving Arts Scotland CIC said: "We are delighted to have been able to develop such a positive partnership with EDF Energy. The fact that Hunterston B had a safe planned outage shows how valuable and cost effective video is in helping businesses deliver on-time, cost effective and safe projects across all industries."

During the statutory outage there were only two minor accident book entries and no-one has lost time at work due to any on-site accidents for more than nine years.

A statutory outage is carried out on each of Hunterston B's generating units every three years and is like an MOT on a car but on a much larger scale.

The unit which was offline for its outage started generating electricity again on 13th November.

Bright Sparks Start Hunterston B Apprenticeships

Hunterston B power station's latest recruits have joined the company to start their apprenticeship in the nuclear industry.

The five new recruits for the North Ayrshire station, Holly Clarke (17) and Aaron Andrew (18) from Irvine, Jay Little (18) and Oliver Woods (20) from West Kilbride and Stacey Chisholm (19) from Kilmarnock were appointed after an exhaustive recruitment process.



The group started their careers with EDF Energy with a team-building week in the Lake District where they met other apprentices from power stations across the UK. The apprentices took part in a series of challenges which culminated in climbing Helvellyn.

Acting Station Director, Paul Forrest, said: "The group came to visit the station with their families before their trip to Ullswater. It was a pleasure to welcome them to site and they showed a great deal of enthusiasm for the learning they are about to undertake. I wish them well as they start their new engineering careers."

With the outward bound course complete, the apprentices are now studying at HMS Sultan in Portsmouth where they will spend the next two years. The apprentices will learn basic engineering skills in their first year, before specialising into their trade in the second year.

Apprentice Coordinator, Craig McGhie, said: "The apprentices have started their training just as recruitment for next year's intake begins. Applications open on 1 November and we always get a great response from the local area. We hope anyone who is interested will get in touch and book a place on one of our information days to find out more."

The station held information sessions on 11th, 12th, 25th and 26th of November. There is also more information available on EDF Energy careers website: www.edfenergy.com/careers

The apprentice recruitment also supports EDF Energy's national campaign #PrettyCurious to change teenage girls' perceptions of science and inspire them to pursue science-based careers.

Five Star Success for Hunterston B Visitor Centre

Staff at EDF Energy's Hunterston B power station are celebrating after the visitor centre retained its five-star rating from VisitScotland.

The visitor centre, the guides and the power station tour were recently assessed by a mystery shopper who described the experience as "fascinating" and said the tour guide demonstrated a "real enthusiasm for the site".

The visitor centre is one of just seven attractions in Ayrshire and Arran with a five-star rating, an accolade it has held since 2013.

The awards focus on the standard of the welcome, hospitality and service provided and show the standard of customer care visitors should expect.

Acting Station Director Paul Forrest said: "This is a great achievement for the visitor centre and I am very proud of the team who have maintained such a high standard over the past five years.

"Nuclear power plays an important role in our energy infrastructure and last year Hunterston B generated enough electricity to power almost 2 million homes. The centre and the tour give people the chance to visit the heart of a working power station and find out exactly how this happens."

Visitor Centre Coordinator, Emma Horne, said: "I am delighted that we have retained a five-star rating. The guides at the visitor centre work incredibly hard to ensure every visitor who comes through our door is given a warm welcome and leaves feeling well informed about the work we do here.

"Over the past five years we've had more than 14,500 people through our doors. Our tours are free and we cater for individuals as well as groups so I would encourage anyone who has not visited yet to get in touch and book a tour."

You can visit Hunterston B power station's Visitor Centre Monday- Friday between 9 am and 4 pm or at weekends (subject to availability and demand). If you would like a plant tour you will need to book in advance on 01294 826008 or you can e-mail hunterstonbtours@edf-energy.com.

For more information about anything in this report or other station issues, contact:

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5. Glossary of Terms

Term	Definition
Unit	A unit refers to one of the reactors at the power station and its generating turbine
Nuclear reportable event or incident	Nuclear reportable events are events reported to the Office of Nuclear Regulation (ONR) in compliance with EDF Energy's nuclear site licences.
Environmental event or incident	Environmental events arise from wastes or discharges above permitted levels or breaches of permitted conditions.
Lost Time Incident (LTI)	When a member of staff injures themselves at work, and is absent from work for one day or more, this is referred to as a lost-time incident (LTI)
Total Recordable Incident Rate (TRIR)	Total Recordable Incident rate is the total number of Lost Time Incidents, Medical Treatment Cases, Restricted Work Cases and which is divided by the amount of total amount of man-hours and then multiplied by 1 million. This indicator is a 12 month rolling figure. $((LTI+MTC+RWC)/manhours) \times 1000000 = TRIR$ 0.6 represents 1 Restricted Working Case during May 2017.
Outage	A period during which a reactor is shut down. The periodic shutdown of a reactor including for maintenance, inspection and testing or, in some cases, for refuelling is known as a planned outage. In the UK, some planned outages are known as statutory outages and are required by the conditions attached to the nuclear site licence needed to operate the station. Unscheduled shutdown of a reactor for a period is known as an unplanned outage.