



# Site Stakeholder Group

Hunterston B Station Director's Report

Period: February to April 2018

## 1. Reactor 3 Outage

On Wednesday 2 May EDF Energy issued a market and press statement which was also sent to SSG members (text below) outlining plans to extend the ongoing Reactor 3 outage until later in 2018. Since the decision was taken our expert teams on site and at our head office at Barnwood have been working to agree a plan of inspection and modelling which will support our long term safety case and demonstrate the large safety margins that will allow continued operation until 2023. We will provide an update at the SSG meeting.

### Market Statement - 2 May

EDF Energy has been in discussion with the Office for Nuclear Regulation (ONR) to agree the return to service of Reactor 3 at Hunterston B following the completion of a recent inspection programme. The inspections confirmed the expected presence of new keyway root cracks in the reactor core and also identified these happening at a slightly higher rate than modelled.

EDF Energy has decided that, while Hunterston B Reactor 3 could return to operation from the current outage, it will remain offline while the company works with the regulator to ensure that the longer term safety case reflects the findings of the recent inspections and includes the results obtained from other analysis and modelling. The operation of other reactors is not affected.

We have been working over many years to fully understand and prepare for these late life changes to the reactor core and regular inspections at all our plants have provided a clear understanding of how the reactor cores age. The longer term safety case will build on work already completed and EDF Energy expects that this will demonstrate that there are large safety margins both now and for the projected reactor lifetime.

Over £100m has been spent on the graphite research programme which benefits from the expertise of our own team of specialists as well as academics at several leading U.K. universities.

During this time EDF Energy may take the opportunity to carry out additional planned routine maintenance.

We expect the unit to return to service before the end of 2018. This will result in a reduction in 2018 nuclear output forecast of up to 3TWh.

## 2. Safety and Environment

### Station Industrial Safety Performance

Safety performance has continued to be strong since the last report. Hunterston B recently marked 10 years without a Lost Time Incident. That means no staff member or contractor had to take time off due to a work-related injury. This is the longest run in the operational UK nuclear fleet and testament to the hard work and dedication of everyone at the station.

As well as no lost time incidents, there were no medical treatment or restricted work injuries reported by staff or contractors during the reporting period, the Total Recordable Injury (TRI) rate is currently 0.53.

There was a significant reduction in work related injuries during 2017; in 2016 there were 13 accident book entries, in 2017 there were seven. This improved performance was achieved through staff engagement and team work coupled with high standards of nuclear professionalism and accountability.

During January, in collaboration with one of our contract partners, we delivered "Safe Start" to more than 500 staff. The campaign consisted of a trigger moments video and a virtual reality production that was filmed at Hunterston B using contract partners and station staff. The training was well received by staff; giving a renewed focus to safety for 2018.

There have been no nuclear reportable or fire events recorded in the period. We are as determined as ever to achieve our target of zero harm. This will be realised by continuing to work with our engaged workforce and contract partner organisations.

We also continue to learn from events and good practices across the world to improve our safety performance through our culture of continuous improvement. A robust internal governance system remains in place that ensures safety receives appropriate oversight, attention and action.

### 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.

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 our regular partners.

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

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

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 (2017) which are the UK Health and Safety legislation that applies to work with radiation.

During the reporting period the Collective Radiation Exposure (CRE) was above plan (see table below). Collective doses are pre-planned on expected work for each year based on scheduled maintenance, outages and routine operations. 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.

Differences between the actual and planned dose can be down to a range of factors including changes to the work programme.

<b>Radiation Dose to workers (Feb 2018 - April 2018)</b>		
Planned collective dose	9.5man.mSv	
Actual collective dose	11.5man.mSv	
	<b>Employee</b>	<b>Contract Partner</b>
Total Dose	9.67	1.83
Average individual dose	0.02	0.01
Highest individual dose	0.82	0.29
Individuals	412	312

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**

Hunterston B has continued to carry out an extensive programme of emergency response arrangements, training and exercises.

On the 13<sup>th</sup> June, we will be demonstrating our Counter Terrorist emergency response arrangements to the ONR.

### **3. Generation**

Reactor 3/Turbine Generator 7 operated continuously throughout November and December.

On 5<sup>th</sup> January the unit came offline due to an electrical fault and was returned to service two days later. On 23<sup>rd</sup> January the unit shutdown due to an issue with a gas circulator. It was returned to service four days later and operated continuously until 9 March when it was taken offline for its graphite inspection outage. The unit will remain offline for much of the year as work is carried out on the long term safety case for graphite.

Reactor 4/Turbine Generator 8 returned to service on 13 Nov following its planned statutory outage and has operated continually since then.

### **4. Company Update**

#### **EDF Energy Renewables and EDF ENS UK are now EDF Renewables**

EDF Energy Renewables and operations and maintenance business EDF ENS UK is coming together under a new brand.

They are now known as EDF Renewables; the new name for EDF Group's solar and wind activities in more than 20 non-French speaking countries around the world.

Matthieu Hue, CEO of EDF Renewables in the UK said: "In adopting our new brand, we are joining another 20 countries in the EDF family dedicated to renewables. Across the world and collectively this new identity will make us stronger.

"We are already united in our goals to bring costs down for consumers through investment and innovation.

"With the increase of renewables globally, we will continue to develop a diverse, reliable, affordable low carbon energy mix for customers and industry for decades to come."

EDF Renewables has 34 wind farms in the UK, including two offshore wind farms and a battery storage unit.

Its goal is to use expertise and innovation to make low carbon electricity more competitive and effective for consumers.

It also looks after the operations and maintenance of wind farms which helps to increase their production and lifespan.

## The EDF Group acquires a 450 MW offshore wind project in Scotland

The EDF Group, via EDF Renewables in the United Kingdom, a joint subsidiary of EDF Energy and EDF Energies Nouvelles, has bought the Neart na Gaoithe wind farm project from global wind and solar developer Mainstream Renewable Power, following a competitive bidding process.

The wind farm will generate up to 450 megawatts (MW) of renewable energy, which is equivalent to the annual electricity provision of around 375,000 homes. It is a fully consented offshore wind project which is located in the Firth of Forth off the east coast of Scotland. It covers 105km squared, and has a 15 year Contract for Difference at 140 Euros (corresponding to the indexation of the tariff of £114.39 that was set in 2012 prices), and grid connection agreements in place. This project also benefits from a wind regime among the best in the world.

The total investment required to deliver the project is around £1.8 billion. The commissioning of the wind farm is planned for 2023. In line with the group's usual practice, the project will be open to other investors in due course.

## 5. Station update

### Hunterston celebrates decade of safe working

Staff at Hunterston B power station are celebrating a significant safety milestone as the station reached 10 years without anyone having to take time off due to an injury at work.

Since March 2008 staff and contractors at the site have worked more than 18.2 million hours in total without a Lost Time Injury (LTI). That is when someone working at the station injures themselves on duty and is absent for one day or more.

This is longest run across all eight UK nuclear power stations.

Station management recognised the achievement by giving every member of staff and contractor an Easter egg and a first aid kit while an exhibition recognising the success was set up in the canteen so workers could gather to celebrate.

Over the past few years Hunterston B has been leading the rest of the nuclear fleet in its approach to industrial safety by developing new ways to embed safety in everyday business.

The Safe Start campaign which takes place each January aims to focus minds on safety for the coming year and a team from the station developed two virtual reality videos, one of which was used to help workers stay safe during last year's statutory outage.

Technical and Safety Manager, Roddy Angus, said: "EDF Energy takes safety extremely seriously. It is embedded in our culture; we start every meeting by discussing a Daily Safety message to ensure that when people go out to work on the plant safety is at the forefront of their minds.

"We want to ensure that the power station is a safe and healthy workplace but we could not do it without the hard work and diligence of our staff and contractors so I'm incredibly proud to be able to celebrate this landmark with the people who work here."

EDF Energy is committed to causing Zero Harm to people and the environment. In 2017, Hunterston B power station generated enough electricity to power 1.8 million homes and has been producing low carbon electricity since 1976.

## 6. Staffing Update

As of April 2018 the station has 489 employees. Recruitment is ongoing in a number of departments to maintain our organisational capability against agreed station numbers.

The station has prepared a Lifetime Resource Plan to 2023 in support of the business mission of safe reliable generation over extended life. This provides us with an understanding of resource demands through the life of the station; potential attrition rates and what this means for resourcing, retirement of an aging workforce and an understanding of vulnerabilities for knowledge capture and transfer. The station plan is underpinned by detailed departmental plans to integrate opportunities and potential vulnerabilities.

EDF Energy power stations' have a strong local recruitment record with most of the Hunterston workforce living in the area – the stations also draw most of their new apprentices from schools near the sites. The recruitment campaign for the 2018 apprenticeship intake has concluded and we look forward to welcoming four new apprentices in August.

Hunterston B vacancies are displayed on the [www.edf-energy.com](http://www.edf-energy.com) web site.

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