

**LIFETIME OUTPUT**   
(TWh) on 31/10/21

**SIZEWELL**  
**231.3**  
FLEET TOTAL  
2000

**DAYS**   
meeting electricity needs of all UK homes

**SIZEWELL**  
**781.1**  
FLEET TOTAL  
6,767

**YEARS**   
meeting electricity needs of all UK homes

**SIZEWELL**  
**2.14**  
FLEET TOTAL  
18.54

**CARBON SAVED**   
in millions of tonnes\*

**SIZEWELL**  
**80.7**  
FLEET TOTAL  
698.0

**CARS OFF THE ROAD**   
for a year (millions)

**SIZEWELL**  
**38.2**  
FLEET TOTAL  
330.2

## Storing Spent Fuel at Sizewell B

**2000 TWhs** is the equivalent carbon saving\* of;

- Taking **EVERY UK CAR** (31.7 million) off the road for **10.4 years**
- Powering **EVERY HOME** in the UK (29 million) for **18.5 years**

\*when emissions are compared to similar amounts of energy produced by a modern CCGT unit



## SIZEWELL B USES A FUEL STORAGE POND AND A DRY FUEL STORE TO MANAGE ITS SPENT FUEL

Every 18 months Sizewell B is switched off for refuelling and maintenance when a third of the fuel is replaced.

The Sizewell B reactor core holds 193 fuel assemblies, each approximately 4 metres long, and 0.3 metres square.

Each refuelling outage, the fuel assemblies from the core are moved underwater into the fuel storage pond. Then the core is reloaded with one third of "new" (unused) fuel, one third using fuel assemblies that have been used for one fuel cycle of 18 months, and one third using fuel assemblies that have been used for two fuel cycles. This process ensures the most efficient use of the fuel.

Once fuel assemblies have been used three times, they are stored in the fuel storage pond for several years to be cooled before being transferred to the dry fuel store.

In order for the fuel to be safely stored in the dry fuel store building it is loaded into a metal canister which is then welded shut, dried and filled with helium and then placed within a large, leak-tight steel and concrete cask which has been designed to the highest standards with extreme structural strength.

The dry fuel store will safely house spent fuel from Sizewell B until a Geological Disposal Facility is available for longer-term storage.

## ESTABLISHING THE SIZEWELL B DRY FUEL STORE

Following public consultation, the dry fuel store was established to take its first spent fuel in March 2017. The £215million 8-year project, Nuclear Generation's biggest since the construction of Sizewell B, was mainly funded by the independent Nuclear Liabilities Fund which the industry pays into and was established to cover the costs of decommissioning.

This investment means the station can operate until at least 2035 and potentially for 20 years beyond that to 2055. During each fuel cycle, Sizewell B generates ~1200 megawatts of electricity continuously, enough for 3 to 4% of the entire UK.

## FACTS

Every canister in the Sizewell B Dry Fuel Store has:

Made **4 billion KWhrs** of low carbon electricity

enough to run nearly **1.3 MILLION** homes for a year

Each DFS campaign

= **7** casks

= **3 Years** (or two fuel cycles) worth of operation

Casks

= **220** tonnes in weight sat on a seismically qualified concrete slab

**Holtec International**, a world leader in dry fuel store technology, provide the canisters used in the Sizewell B Dry Fuel Store.

**Currently** the Dry Fuel Store contains enough fuel to power two thirds of homes for a year.

