

Nuclear Climate Casualty

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Climate

Climate models running hot.

Knowledge of climate sensitivity and polar ice melt-rate evolving.

Sea-level rise significantly faster than previously thought.

Frequent and destructive storm, storm surge, severe precipitation, and flooding.

Nuclear climate casualty

Rare extreme events today becoming the norm in the future.

Existing risk mitigation measures become increasingly obsolete.

UK coastal nuclear will be one of the first, and most significant, casualties to ramping climate impact.

UK nuclear is quite literally on the front-line of climate change – and not in a good way.

Storm surge

Not just sea-level rise that's important, it's also storm surge.

British Oceanographic Data Centre Global Extreme Sea-Level Analysis:

'Magnitude and frequency of extreme sea-levels (a factor of mean sea-level, tide and storm-induced increase) which can cause storm surge and catastrophic flooding, has accelerated world-wide.'

UK Inst. Mech. Eng.

Existing and proposed new UK reactors together with their spent nuclear fuel and radioactive waste stores will be increasingly vulnerable to sea-level rise, flooding, storm surge, and 'nuclear islanding'.

'UK coastal nuclear sites will need considerable investment to protect them against rising sea levels, and even relocation or abandonment.'

<https://www.imeche.org/policy-and-press/reports/detail/climate-change-adapting-to-the-inevitable>

U.S.

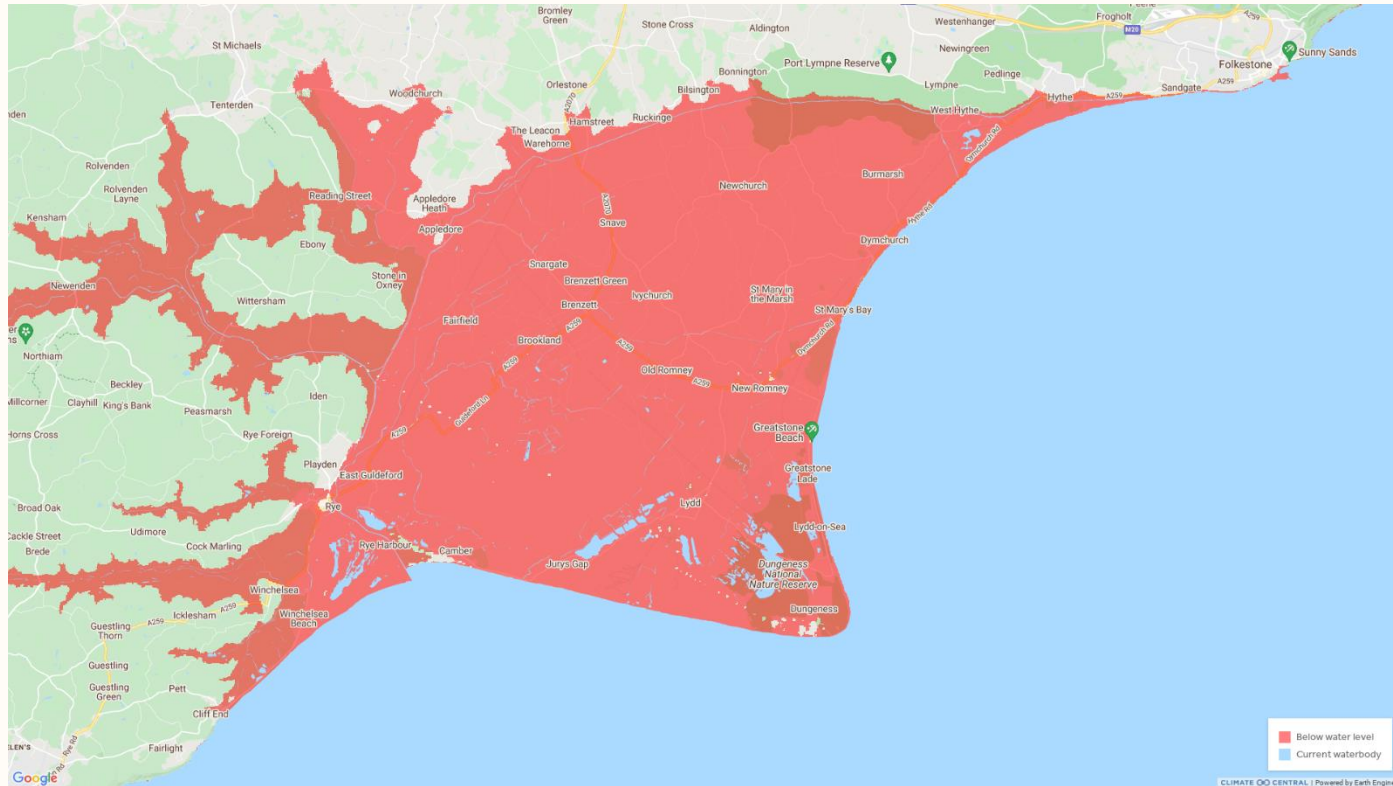
U.S. Nuclear Regulatory Commission: 55 U.S. nuclear sites already experienced flooding hazard beyond their design-base.

U.S. Army War College: NPPs at 'high risk of temporary or permanent closure due to climate threats ... with 60% of U.S nuclear capacity vulnerable to major risks including sea-level rise, severe storms, and cooling water shortages.'

Dungeness EDF NPP



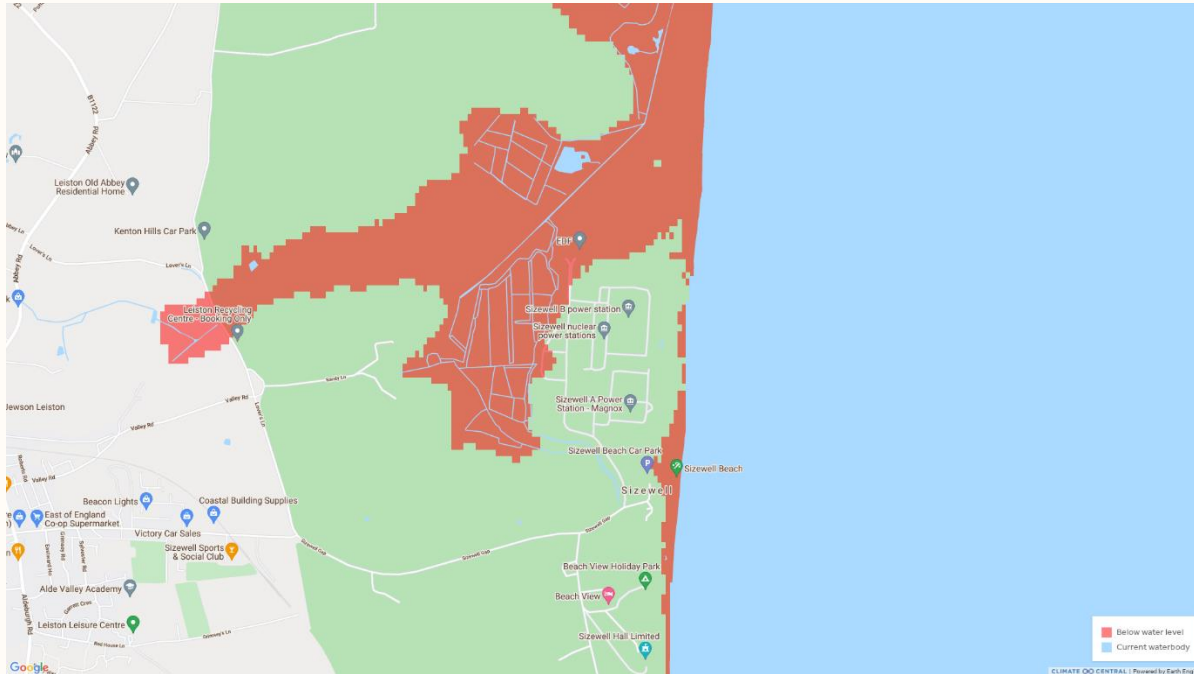
Annual flood risk 2050



Sizewell B NPP



Annual flood risk 2050



Climate change nuclear

<https://www.nuclearconsult.com/wp/wp-content/uploads/2021/06/Climate-Change-UK-Nuclear-June-2021.pdf>

Renewable evolution

Last year solar and wind 80% total new electricity generation capacity installed world-wide.

Renewables met all rise in electricity demand in first ½ of 2022, preventing \$40 bn fuel costs and 239 Mt CO₂.

All this because utility-scale renewables can be built on-time and on-budget, costing less than ¼ of new nuclear.