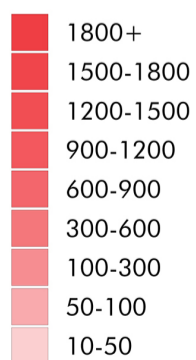


The map shows the deposition of radioactive caesium-137 from the Fukushima disaster as of July 2011. The darker the shading, the higher the level of radioactive contamination and the higher the radiation exposures. Further from the Fukushima plant, radiation exposures were lower but even low radiation doses can cause negative health impacts including fatal cancers and cardiovascular disease.

Initial deposition density of  $^{137}\text{Cs}$  ( $\text{kBq m}^{-2}$ )  
Decay corrected to July 2011



# A nuclear meltdown in New South Wales?

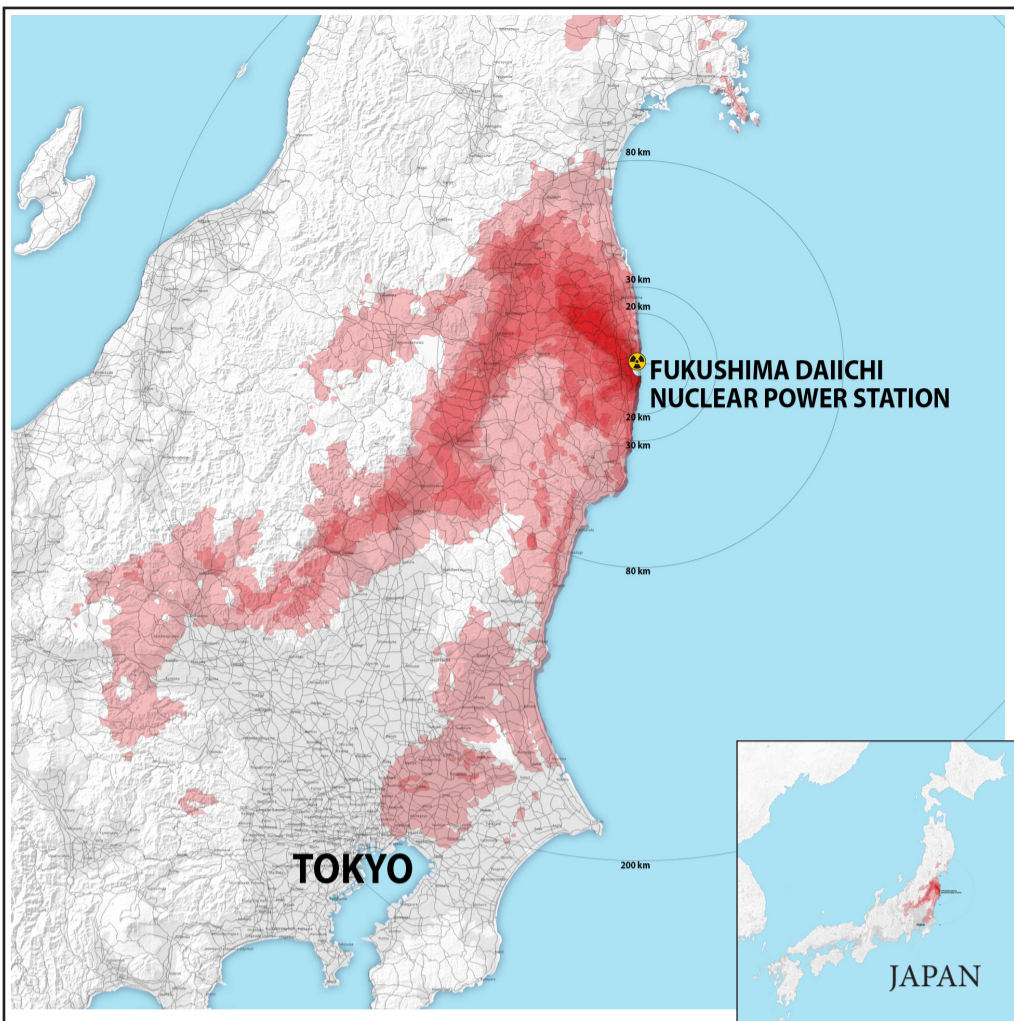
Peter Dutton and the Coalition are proposing to build a nuclear power station 14km from Muswelbrook in the Upper Hunter Valley of New South Wales. The map is a direct overlay of the radioactive plume from the Fukushima disaster as of July 2011. Almost 36,000 people would be at risk of evacuation in a nuclear accident if Peter Dutton's proposed nuclear reactor goes ahead in Liddell.

At [nuclearplume.au](http://nuclearplume.au) you can select the reactor site and wind direction to see how a Fukushima-scale nuclear disaster would contaminate different areas surrounding the seven proposed sites in Australia.

Do you live in the impact area of one of Peter Dutton's nuclear power stations? Find out at [nuclearplume.au](http://nuclearplume.au).



# nuclearplume.au



## MELTDOWN AT FUKUSHIMA

Following the nuclear meltdowns, fires and explosions that destroyed reactors at Fukushima in March 2011, there was a mandatory evacuation zone out to 20 kms.

In different parts of the zone from 20 kms to 30 kms, evacuation was either mandatory or residents could choose between evacuation and sheltering indoors. There was an additional mandatory evacuation zone beyond the 30 km zone to the north-west (Iitate).

The US Government advised US citizens within 80 kms of the Fukushima plant to evacuate.

Areas were divided into Intensive Contamination Survey Areas (7,836 sq km), Special Decontamination Zone (1,117 sq km) and Difficult-to-Return Zone (335 sq km). The mandatory evacuation zone covered 807 sq kms.

Over 191,000 people evacuated contaminated and threatened areas including 165,000 people who were required to evacuate and an estimated 26,600 who voluntarily evacuated. For many, their displacement and dislocation is ongoing, with the worst affected being women and children.

## THE RISKS TO AUSTRALIA

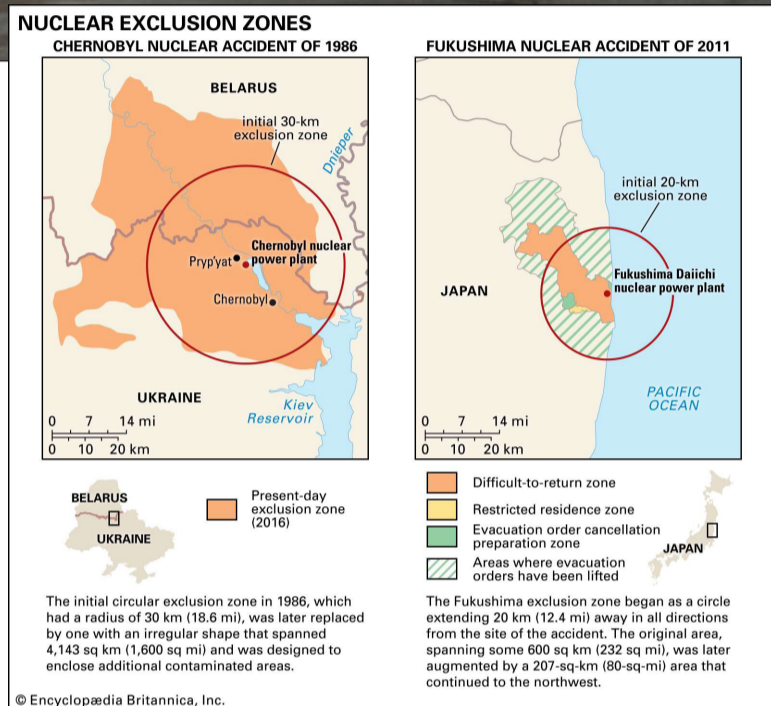
Applying a 30km zone at the seven nuclear power sites proposed by the Coalition, nearly 200,000 people would live in potential evacuation zones. Hundreds of schools, hospitals, day care centres and early learning centres are located within 30 km of the seven nuclear power sites. A full list of these facilities is available at [nuclearplume.au](http://nuclearplume.au)

In a submission to the parliamentary inquiry into nuclear power generation in Australia, Emergency Leaders for Climate Action warn that nuclear reactors would introduce significant and unnecessary risk to Australian communities and emergency responders, including firefighters already stretched by escalating climate fuelled disasters.

The Australian civilian nuclear regulator ARPANSA sets out the health impact studies, response measures and zones, and procedures that are to be put in place in the event of a nuclear accident (see "Guide for Radiation Protection in Emergency Exposure Situations, Part 1 and 2). In tasking emergency workers to undertake "urgent protective actions" in response to a nuclear accident, the ARPANSA Guide (Part 2, p.18-19 and Table 3.1) authorises ionising radiation exposures to workers of up to 50 mSv.

TRY THESE MAPS OUT FOR YOURSELF:

[nuclearplume.au](http://nuclearplume.au)



- Radioactive pollution could reach as far as Newcastle, and spread as far west as Dubbo, north to Armidale, South to Bowral and as far east as Forster Tuncurry
- Muswellbrook Hospital is within the 30km evacuation zone and would be hit with highly concentrated radiation in the event of an accident
- Within the 30km evacuation zone at Liddell there are 15 schools, 4 hospitals and health facilities and 11 child care centres

In the event of an expanding radioactive pollution plume, an "Urgent Protective Action Zone" would be established. The local population could require evacuation and some would be required to undergo 'decontamination' and to receive medical treatment. Locals within this Urgent Protective Action Zone face authorised ionising radiation exposures of up to 50 mSv, which is 50 times higher than the maximum annual public radiation exposure limit from anthropogenic sources.

In an even more severe nuclear accident, 'Category 1 Emergency workers' could receive doses of up to 500 mSv, a dangerously high exposure 500 times the maximum annual public radiation exposure limit. ARPANSA states that female workers who might be pregnant must be excluded from taking actions that might result in such high radiation exposures.

## AN UNINSURABLE INDUSTRY

Housing prices have been shown to fall due to proximity to nuclear plants. It is important to note that insurance policies from many of Australia's major insurers - including AAMI, CGU, Allianz, QBE and NRMA - contain specific text excluding coverage for nuclear disasters. None of these will insure homes, cars or possessions against a nuclear accident or release.

JOIN US IN BEATING THIS NUCLEAR PUSH:

[dont-nuke-the-climate.org.au](http://dont-nuke-the-climate.org.au)