

In this newsletter we look at three separate issues that hit the news headlines leading up to Christmas 2024. In each case the media presents arguments against C2N, that need more balanced consideration.

1. The Dr. Margaret Beavis misleading Australians on health risks associated with nuclear energy (The Australian – 19 Dec 2024)

According to [Dr. Margaret Beavis](#) there are increased risks of cancer, strokes and heart attacks with nuclear power compared with renewables. This claim by Dr. Beavis is ill informed on the balance of evidence in relation to nuclear energy. The nuclear industry is very carefully regulated and monitored, with safeguards in place to prevent any harmful radiation exposure. Nuclear power plants, nuclear ships and submarines have all been operating for some 70 years without any adverse health issues.

Putting this in perspective, the vast number of deaths from the energy sector occur through burning fossil fuels with resulting air borne pollutants and carbon monoxide. For example, the World Health Organization [estimates that air pollution in China](#) is responsible for about 2 million deaths per year. This is one of the reasons that a transitioning of the energy sector from coal-to-nuclear C2N is vitally important for health, not just in Australia, but globally.

2. Dutton stated a small modular reactor creates a can of coke each year needs clarifying (SMH – 19 Dec 2024)

Peter Dutton has been [attacked by the Labor Government](#) for suggesting that a small modular reactor produces 1 coke can, worth of waste in a single year. Chris Bowen jumped on this comment suggesting the waste was 27,000 coke cans. Instead, as the energy minister, you would expect him to be more helpful in the energy debate. The volume of nuclear fuel in a coke can, refers to the [total volume of fuel that a person would use in their lifetime](#).

The key take-away from this issue, is that nuclear fuel has very high energy density, this is due to a nuclear reaction of an atom producing some 20,000 times the energy of a chemical reaction. As a result, the fuel that is needed, and the waste that is produced is miniscule compared with fossil fuel. Putting this in perspective, all the spent nuclear waste in the world would fill a volume about the size of the MCG.

3. Labor to attack Coalition Plan on Economic Growth (The Age – 27 Dec 2024)

The suggestion that the Coalition Nuclear Energy Plan would cause a loss of economic growth of \$4 trillion by 2050 is at odds with any reason, as cheaper and more reliable nuclear energy will help to stimulate growth, compared with more costly renewables, with batteries and peaking gas plants.

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Nuclear debate headlines in Dec 2024



[Dr. Jim Chalmers criticised Peter Dutton](#) for not adopting the “Step Change” model, rather than the “Progressive” model, both produced by the Australian Energy Market Operator (AEMO).

What Chalmers fails to point out, is the Frontier Economics Report 2, shows that renewables with nuclear is around 25% cheaper than renewables with batteries and peaking gas for both models. So irrespective of growth assumptions, nuclear provides significant cost savings.

The Frontier Economics Report also highlights problems with the “Step Change” model not being realistic, for instance it assumes 98% of vehicles in Australia will be EVs by 2050. This is despite Australian Automobile Association ([AAA Q3 2024](#)) figures showing EV sales at their lowest level since 2022, at 6.57%. By comparison Internal Combustion Engine (ICE) sales were 74.2%, hybrid sales 16.7% and plug-In hybrids were 2.53%.

What Chalmers failed to point out is that electricity used for EVs doesn't generate economic growth in Australia. What generates economic growth is cheaper and more reliable electricity, that can be scaled up with projected increases in demand together with flexibility. Australia has this flexibility by managing coal power station closures and transitioning to a new energy mix. Nuclear reactors are also far more easily scaled than a system that relies on a much greater capacity in renewables, batteries, peaking gas and expanded transmission lines.