

Select Committee on Nuclear Energy
Parliament House
Canberra ACT 2600

1st November 2024

Dear Committee,

I write as the Shadow Minister for Energy in the Parliament of Western Australia to present this letter as my submission to your enquiry into nuclear energy in Australia.

On the 26th of May 2024 the Western Australian State Liberal Party publicly released the comprehensive energy policy I wrote following a year and a half of detailed research. This policy highlighted the need for additional gas generation capacity in Western Australia to maintain dispatchable energy levels in the coming years as the transition of our energy system occurs.

It also addressed our position on nuclear energy, so I have included below a slightly condensed version the relevant section of the policy:

We will watch carefully technological advances in all areas of electricity generation and storage and adopt them when they are proven economic and productivity performers.

We will monitor all generation options for Western Australia, from the currently economically deliverable solar and wind generation to other potential sources such as wave, tidal, geothermal and nuclear energy.

At this point in time wind and solar generation have proven economically viable sources of generation but require significant investment in storage and firming to be reliable. The WA Liberal Party believes they will play a major role in generation into the future.

The WA Liberal Party remains source agnostic and will retain the capacity to adopt developing technologies.



The Western Australian Liberal Party is not afraid to look at nuclear power generation for the state energy grid when it becomes economically viable.

The peak demand in the South West Interconnected System is 4,000 to 4,500 Megawatts, which means the ideal size of a new generator is about 300MW.

The world's first truly commercial 300MW small modular nuclear reactor is currently under construction in Canada, and I am watching the economics of it carefully.

If the long term cost of production for these units goes below US\$100 per Megawatt hour they will start to be much more competitive.

In 2022 the World Nuclear Association suggested the Levelised Cost of Electricity (LCOE) of nuclear energy from larger units was approaching this milestone, saying *"For nuclear power (2200 MWe plant), capital cost including financing (at a high discount rate) ranged from \$7675 to \$12,500 per kilowatt, and the LCOE accordingly varied from \$129 to \$198/MWh."*

By comparison estimated LCOEs for coal and gas range from US \$60 to US \$140/MWh.

If the economics of small scale nuclear generation stacks up in the future, we will take a closer look at it.

The eastern states energy grid is in a much different position, with a demand more than ten times ours. This means that larger, more economically viable nuclear generation plants could be used there now.

The most prospective action would be to replace the high emissions brown coal generation in Victoria.

For this reason, I am happy to support the Federal Opposition's push in the east. I think it is certain that they will need nuclear energy to meet both their carbon reduction and energy supply goals.

We support the lifting of the moratorium on nuclear energy at the Commonwealth level so new nuclear technology can be fairly assessed as an option for a balanced energy mix for Australia in the future.

In WA, the Labor Government's energy transition plan is also in tatters, but with a smaller market we have a simpler option.

To keep the lights on and air conditioners running during a transition to a lower emissions future, at a cost the people can afford, WA will need to maintain coal use until gas generation is ready replace it, and then use gas to take us to a high technology, low emissions future.

That future may include nuclear generation when the cost stacks up.

As the Committee will observe we are not frightened of the future use of nuclear generation in Western Australia, and it is my belief that the majority of people in this state are no longer so concerned about the safety of the industry that they oppose its use. The scare campaigns seen in the past are starting to fall flat.

The question in my view is one of the rate of technological improvement that would bring the cost of nuclear energy into the competitive price range. There are suggestions of rapid progress on the front.

In the meantime, I believe it is critical that the Australian community has a sensible discussion about the prospects of nuclear energy free from the emotional rhetoric that seems to have dominated the debate in the past.

We must be open to a detailed analysis of what nuclear energy could deliver and at what cost, and we must also be able to calmly and rationally work through where nuclear technology might fit into existing energy systems and the circumstances under which it would do so.

If we fail the start looking at the possibilities today, we will be completely unprepared for the inclusion of nuclear energy in the future if it turns out that it is essential to maintain supply, keep the lights on and business, industry and household air conditioning running, and at the same time meet our targets for a lower emissions future.

Let us open up the debate and examine the possibilities now!

I also strongly support the mining of uranium in Western Australia to provide the feedstock for world nuclear generation. The world needs our uranium if it is to have any chance of decarbonising or significantly reducing emissions.

Western Australia is in a prime position to assist that outcome if uranium mining was allowed to develop, which should happen as a matter of priority.

Yours faithfully

The Hon. Dr Steve Thomas