

ENERGY SECURITY — BATTERY INSTALLATION

Motion

HON DAN CADDY (North Metropolitan) [11.30 am] — without notice: I move —

That this house commends the Cook government's commitment to securing energy security for Western Australia, as demonstrated by the construction of the Kwinana big batteries and the Collie big battery.

This motion is almost a continuation of this morning's debate. I will try not to touch too much on what was said this morning. I want to pick up on one thing—I was going to speak about it later—and that is the Liberal and National Parties want to privatise the distribution network and Western Power. Everybody knows that Western Power and the provision of power will always be better in state hands. If Hon Dr Steve Thomas had his way, when the power went out, we would be ringing some hedge fund in New York to try to get something done to put the power back on. The hypocrisy around privatisation is just incredible. I want to broaden the scope a little.

Hon Neil Thomson interjected.

Hon DAN CADDY: I will take interjections but not from the member.

I want to start my speech by looking at the International Energy Agency's report *World energy outlook: 2022*. I have a reason for doing so. This morning I want to talk about energy security, as the motion states. I want to read the first paragraph and a couple more lines of the foreword to this report. It states —

Today, the world is in the midst of the first truly global energy crisis, with impacts that will be felt for years to come. Russia's unprovoked invasion of Ukraine in February has had far-reaching impacts on the global energy system —

Hon Neil Thomson interjected.

Hon DAN CADDY: The member should just listen; he might learn something.

The ACTING PRESIDENT (Hon Sandra Carr): Order! If the member would like to not take interjections, I invite him to direct his remarks through the chair, please.

Hon DAN CADDY: Thank you for your sage advice, Acting President. I continue —

... disrupting supply and demand patterns and fracturing long-standing trading relationships.

The crisis is affecting all countries ...

The report was referring to a particular event. The report goes on to refer to the mistaken idea that there is somehow a clean energy crisis. It states —

That is simply not true. The world is struggling with too little clean energy, not too much.

...

Another mistaken idea is that today's crisis is a huge setback for efforts to tackle climate change.

In fact, that is not true. It continues —

... in fact, this can be a historic turning point towards a cleaner and more secure energy system.

Obviously, this is an international report and it does not refer to Western Australia or even Australia at any great length. The Cook government is one of the governments that is leading the way to ensure that we are not only securing the energy future for this state, but also heading towards a green and renewable future. We are doing exactly what is outlined as best practice in this report.

The other report I will mention is, funnily enough, from the Climate Council—the other side. This report is titled *Climate allies: Australia, the United States and the global energy shift*. This is also interesting. I only want to refer to the first couple of pages of this report. It looks very much at the Indo-Pacific region, which I spoke about last year, saying that food security was a main issue. Energy security is also one. I will go through the key findings of the report, the first being —

The climate crisis is a national security threat for Australia and the United States

The second key finding is that Australia and the US are cooperating in our region. The third key finding relates to the United States specifically. The fourth key finding states —

Australia is well-placed to become a clean energy superpower—but we must act fast

The report notes —

Extract from Hansard

[COUNCIL — Thursday, 14 March 2024]

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Hon Dan Caddy; Hon Darren West; Hon Stephen Pratt; Hon Shelley Payne; Hon Dr Steve Thomas; Hon Kyle McGinn; Hon Dr Brad Pettitt

Without strategic government policy to support new industries, Australia could miss the opportunity to capitalise on its competitive advantages in clean energy production.

The reason I have referred to these two reports is that they speak both globally and at a regional level about the critical importance of ensuring energy security. We are doing very well in Western Australia. These reports are an important starting point for this discussion, given the increasing interconnectedness of the world in which we live. As legislators, we should always be looking at the larger picture. Thinking globally and acting locally is always the key to the best decision-making.

The Institute of Public Affairs' *State economic scorecard 2024* came out in the interim, if you like—since I put this motion together. I am sure Hon Dr Steve Thomas is an avid reader of it. It was only published earlier this week. It was interesting. *The West Australian's* reporting on the scorecard was fascinating. It had two great headlines; it did not know which one to go with. The first was “Cheap energy, low taxes and turbocharged wages; WA tops ... economic scorecard”. The second was “WEST IS BEST: WA named ‘strongest state in the nation’”. I found those two headlines describing how well we are going interesting. Members opposite probably did not want to read an article such as this praising the state government. I will get back to why praising the state government is important in the energy context. After a couple of weeks of articles, the member would probably take anything that was not about him; if it praised the government, so be it. That article is important because one of the key measures is energy prices. At a time when we are investing billions of dollars in energy security, in the two large batteries in Kwinana and in the large battery in Collie, we also came out as number one in the country for energy prices. That is an outstanding achievement from this state government.

I will move on quickly because I want to refer to what the Cook government is doing and the main part of this motion—energy storage and the big batteries—and talk about how it is all going. The best way to tell this is to have a chronological look at the progress we have made in the last two years because it tells the story best. In the context of energy prices, although we are keeping them down, we note that there were record increases in the price of energy before we came to government. We are keeping them down. I will tell members what we are doing. In May last year, the first battery in Kwinana was already completed and ready for testing. That battery is a key element in the state's plan to transition to zero emissions and is also absolutely key in energy security. The first battery—I may be wrong but I think it is the smallest of the three—can store enough power to provide electricity to 160 000 homes for up to two hours. That is no small feat and no small addition to our energy market and our energy grid, especially in the context of energy security and being able to very quickly respond to what is happening. At the same time as we were testing that, the then Premier announced another \$2.3 billion for the second-largest battery energy storage system at Kwinana. That will have four times the energy storage as stage 1, and stage 1 is capable of powering 160 000 homes for a couple of hours.

In June 2023, just a month later, there was an announcement that Collie was the site for the next big battery. Work has already started on that. It will supply energy to Perth and more than one million homes and businesses—this is critical—between Geraldton to the north, Esperance to the south east and Kalgoorlie to the east. That is a fantastic project because of the stability and energy security that it will provide, which is what I am talking about, and because it will create well over one hundred construction jobs and many new opportunities for suppliers in and around the Collie region. That long-duration battery should be operational by the end of this year and will provide up to 197 megawatts for up to four hours. It is a game changer and will significantly boost both security and reliability for the south west energy grid, especially during times of peak demand in the evening.

In November 2023, we awarded a contract for stage 2 of the Kwinana project. Stage 2 is bigger than stage 1. It will deliver 200 megawatts of power with 800 megawatt hours of energy storage. It will create even more jobs than the Collie project. It will create well over 150 jobs during the peak of its construction and will also hopefully be completed by the end of this year. That is another example of the Western Australian government investing soundly in our energy future. That is a \$635 million investment for the stage 2 battery at Kwinana as part of our strategy.

Collie is the home of the very hardworking local member, Jodie Hanns, MLA. In January this year, work ramped up on the 500 megawatt, 2 000 megawatt hour facility in Collie, which I spoke about earlier.

I want to touch on something that I was not completely across until recently. Yesterday, the Standing Committee on Estimates and Financial Operations held its annual report hearings, which were broadcast. I was there with Hon Peter Collier, Hon Samantha Rowe, Hon Dr Steve Thomas and Hon Dr Brad Pettitt. I am sure I am missing someone. At the hearing, it was explained to me, the other members who were there and anyone who was listening along at home exactly what Project Symphony was. It is a fantastic project. It is a large virtual power plant. The benefit of it is that it will help manage and balance the electricity system. It will soak up excess solar power from individual rooftop solar power during the day into the battery and discharge it at night when the energy demand is high. It will smooth the power supply very well during peak times. This is the first time that a community battery—

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I hope that phrase is correct—of this size has been orchestrated with customer-owned individual batteries in WA. Project Symphony is an absolute step forward.

Finally, although I will not have time, I wanted to talk in some depth about Western Power. I have a few quotes from the shadow Minister for Energy that I want to put out there. The shadow minister, Hon Dr Steve Thomas, is a good friend of mine. I am glad that he kept the energy portfolio. I am truly an outsider when it comes to the machinations of his party, but I know that he was banished to the back bench, or punished, shall we say, for speaking to a former Premier. At first glance, it seems curious to me that he was banished for speaking to that individual about matters that relate to the energy portfolio yet, as an excellent shadow Treasurer, he had the shadow treasury portfolio taken away from him even though he has kept the energy portfolio. I think it is a backhanded compliment to the member that the leadership of his party did not think anyone else in his team was capable of handling such a complex and big portfolio. Obviously, his resounding preselection win shows that the members of his party feel the same way. I congratulate the member for that. It was a great win for him. Hon Tjorn “Lazarus” Sibma had a great win on the weekend as well. I look forward to listening to the member’s remarks in the future as shadow Minister for Energy.

HON DARREN WEST (Agricultural — Parliamentary Secretary) [11.45 am]: This is a great motion and I thank Hon Dan Caddy for moving it. This is a relatively new portfolio for me, and it is wonderful and fascinating to be working in the energy space. I have met some wonderful people. It is an amazing time to be in the energy space because in 30 years our energy network will look very different from what it does today. It is an honour to be part of the transition.

As we know, only the Cook Labor government can be trusted with that transition. As a society, we need to move from fossil fuels to renewable energy, and we will do that. We will futureproof our energy system, invest in renewable hydrogen, and support the critical minerals and rare earths industry. We are blessed to have many of those in Western Australia. We will make sure that those projects are up and running as efficiently and strongly as they can be. We will make our own power systems cleaner and more reliable. We need to do that for future generations and ourselves because we will have a better and more efficient energy system.

We are committed to retiring all the coal-fired power stations by 2030. That is a big deal for Collie, and we have managed that transition by working with the community. We will replace those assets with renewable energy infrastructure. It is a big task. Renewable generation will be the future. We will need to alter the way we do energy transmission, but we will keep it in-house. I know that Hon Dan Caddy had nice things to say about Hon Dr Steve Thomas, and we like him. We can say that publicly, especially now that he has been preselected. However, I come back to the notion of privatisation. I have some quotes from Hon Dr Steve, who said on 15 June 2017 —

I am certain we both agree that the biggest issue we have is that we should have sold Western Power five years ago.

On 30 August 2017, he doubled-down and said —

We could argue back and forth for as long as we want to about how much ... might be realised by the sale of Western Power, but it is absolutely critical, if we have the capacity to realise that asset, because in a decade’s time there will be no asset to realise.

The following month he tripled-down and said —

There is no easy answer to this. I have no personal objection to privatising the TAB, but I suggest that similar to other things such as Western Power, if it is not privatised soon, the government will find itself stuck with a diminishing asset that has limited value by the end of the process.

He then quadrupled-down and said —

I can suggest other areas it might like to look at for privatisation. We might start with Western Power —

Hon Dr Steve Thomas interjected.

Hon DARREN WEST: It is not privatised, member. I continue —

We might start with Western Power while it still has any value. That value will be gone fairly quickly, so the government should sell it while it can. The privatisation process should not necessarily be scoffed at ...

That was the Liberals’ position back then. The Liberals’ policies on power have only deteriorated since then. It had the green energy plan and now it has the nuclear plan. The Cook Labor government is the only government that can be trusted to deliver the energy transition that is needed. Synergy is progressing critical wind farm and battery storage system products—they are publicly owned, member—in line with the state government’s commitment to replace our coal-fired power stations with renewables. As Hon Dan Caddy quite rightfully pointed out, Hon Dr Steve Thomas

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is very learned in this area. I am pleased to know that I am not the only one taking a great interest in renewable energy. Synergy has successfully commissioned the Kwinana battery energy storage system 1 on time and on budget.

If anyone gets the opportunity to read the transcripts or watch the Standing Committee on Estimates and Financial Operations hearings from yesterday—with Energy Policy WA, Western Power and Synergy representatives—they will know that the future of Western Australia’s energy transition is in very good hands. They are on top of their game, I can tell members. We are on top of our game as a government and through those agencies.

They commenced site works in 2021, successfully commissioned the system in mid-2023 and are currently playing an important role in maintaining energy security in WA’s south west interconnected system. As Parliamentary Secretary to the Minister for Energy, I am always sitting on the edge of my seat on very hot weekdays in summer. We got through them largely unscathed, other than supercell storm events and pole-top fires—naturally occurring disasters. We had to make some alternative arrangements but we got through those and KBESS was one of the reasons we did.

It is approximately the size of 14 tennis courts—100 megawatts of capacity and 200 megawatt hours of storage makes it capable of powering 160 000 homes for approximately two hours. It will get us through that peak demand, which we know is between about 3.00 pm and 9.00 pm, peaking around 6.00 pm. KBESS2 is the second utility-scale battery at Kwinana, adding to stage one. That will be 200 megawatts and 800 megawatt hours of energy storage. It will be quadruple the size, powering 320 000 average homes for about four hours. In 2024, Synergy installed the containerised battery system for KBESS2—a significant milestone. It has already created more than 160 jobs. We are all about local jobs. It is due to be completed by the end of this year. We will have those two batteries on and then, of course, as Hon Dan Caddy mentioned, CBESS at Collie will remain at the heart of our electricity system with the biggest battery in the world.

Transitioning from coal, Western Australians will still be able to thank the Collie community every time they flick on a switch—the 500 megawatt/2 000 megawatt-hour battery for Collie is set to be one of the largest. KBESS will be twice the size of Synergy’s Kwinana batteries, and will power 900 000 homes for about four hours. Once those batteries come on, we will be able to generate electricity during off-peak times, store that in batteries and use it in times of high demand.

The Neoen Collie battery is not only the Cook Labor government investing in Collie as a renewable energy hub. French company Neoen is building its own grid connection battery in Collie. It is its first project in Western Australia with 120 jobs in and around the Collie area. We hope that will come online in October 2024.

CBESS has been commissioned. In 2025 we will have a whopping three gigawatt hours of battery storage available to support our energy system. We are a world leader in battery storage with another 41 megawatts of wind generation coming online by 2030. Those renewable projects will be critical to the state’s decarbonisation efforts as we work towards net zero by 2050. That is where we are going—net zero by 2050.

Only the Cook Labor government can be trusted to deliver the energy transition that Western Australia needs. We are delivering a sensible, managed transition to a lower carbon future. We are investing in renewables transmission and storage and we are working with the private sector to unlock further investment and economic opportunities for the state. We will always do what is right for WA. Let us get on with it.

HON STEPHEN PRATT (South Metropolitan) [11.53 am]: I start by saying that I do not purport to be an expert on energy and big batteries, but I have been on a learning journey over the last few days and have done some research. On that note, I thank Hon Dan Caddy for raising the motion. Clearly it is an important topic on which, as I said, I am no expert. I am keen to speak because one of the big batteries that is being built, or is in the second phase of the project, is happening in Kwinana, which is in the South Metropolitan Region. From what I have read, I get the sense that we are in the early stages of a rapidly advancing technology landscape and we have a foot in the game. I think that is a positive thing and I am glad that we are investing in the energy transition space. I am very proud to be part of the Cook Labor government that is delivering a sensible managed transition to a lower carbon future.

Growing up, my older brother was a big fan of *Transformers*. I am not sure if anyone in here is familiar with *Transformers*, but he had the toys. They certainly do not make them like they used to. They were solid and made from metal and could do amazing things.

Hon Stephen Dawson: I bought two Transformers for my nine-year-old in America last week and brought them home to him yesterday, so I am very aware of *Transformers*.

Hon STEPHEN PRATT: Very good—so it is still a popular franchise. My brother watched the cartoons and the movie on repeat, so I have some recollections of what went on in that show. I make mention of this because I recall one of the main focuses was on the fight over an energy source. The energy source back in the days of the cartoon was a thing called energon cubes. As I recall, it was a futuristic technology that allowed for the storage of significant

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amounts of energy into a small cube. There are similarities between the battery storage that we use in households and what we are talking about today with the frontier we are quickly approaching.

Another analogy from *Transformers* is that there were the Autobots and the Decepticons. I like to think of our side of politics as the Autobots, and those on the other side—well, I think I will leave it at that for others to interpret. Coming back to the motion, in my research on this topic I was reminded of the situation in South Australia, which many might be familiar with. There were blackouts and a tweet to Elon Musk that led to them building a large-scale battery system over there. From what I understand of what we are doing here in Western Australia, the system in Kwinana has a similar capacity to the one built in South Australia, and the one in Collie will be even bigger.

What is the government doing? What do we know? Only the Cook Labor government can be trusted to deliver the energy transition Western Australia needs. We are delivering a sensible, managed transition to a lower carbon future. We are investing in renewables, transmission and storage. We are working with the private sector to unlock further investment and economic opportunities for our state. The Cook Labor government will always do what is right for WA and this is a key example of that.

In the more modern adaptation of *Transformers*, the computer-generated imagery movies—I think they call it CGI—the Energon cubes have been adapted into a thing called the AllSpark. That is a more futuristic piece of technology that provides the power source that keeps all the Transformers alive and able to do what they do. I think we are heading down that path and it is funny how things in movies and TV shows can come to fruition. I think there are a few in one of my favourite movies, *Back to the Future*. I have been waiting for the hoverboard to come around and it is still not here. I am looking forward to that.

There will be much debate on which direction we as a state and a nation take in energy supply and security for the future. I appreciate Hon Dan Caddy raising this matter in the Council today. I think it is an exciting issue to discuss in the chamber and I am excited to see how the batteries in Kwinana and Collie progress. This could potentially be a way forward to adding an extra layer or a security blanket to our energy supply system in Western Australia.

HON SHELLEY PAYNE (Agricultural) [11.58 am]: Thank you to Hon Dan Caddy for bringing this important motion forward today. As a regional member, I would like to talk about energy security in the regions. We are doing a lot of great work in that area, and I never want to miss an opportunity to talk about the great work of Horizon Power. Horizon Power has been doing a lot of work, particularly since 2015 with the fires in Esperance, on some of the ageing network there, and it has also done work on standalone power systems. Seventy-eight of the systems have been installed to date. These new systems are highly energy efficient. They can produce up to 80 per cent renewable energy. We are putting these systems in some of the remote areas with ageing infrastructure, which allows the removal of many kilometres of overhead powerlines. By putting in these new systems and removing the old powerlines, we are of course improving our energy security. The government has made a commitment to 1 000 of these units across the whole state. Horizon Power will put 150 of these in its areas. I commend the government for that work.

Today we talked about Telstra and the outages that have happened during emergency incidents, so I mention the work that Horizon Power did on these standalone power systems for Telstra towers. The first standalone mobile communication power system in Esperance has been put in. I am sure we were all hoping that Telstra would take up a lot more of these systems, and we hope it will. We will have to continue to pressure Telstra to do that. Hon Stephen Dawson mentioned that he was continually writing to Telstra and the federal government about improving our systems.

I also want to talk about the commitment to change to renewable power, particularly our investment in wind farms. Synergy has committed to 410 megawatts by 2030, and this commitment will be very critical to decarbonisation and our movement towards net zero in 2050. I again commend Water Corporation's work towards its commitment to net zero by 2035 and its investment in renewable energy. Water Corporation has taken over the development rights for stage 2 of the Flat Rocks wind farm. Anyone who has been around Kojonup will have seen that construction on stage 1 has already started. Stage 2 will include up to 24 big wind turbines, which are up to 200 metres high. The project is expected to generate one-quarter of the total renewable energy that Water Corporation needs to achieve the target of net zero emissions by 2035.

We have also put in \$10 million towards looking at how we can diversify our economy and manufacture windmill components. That \$10 million has gone into looking at wind turbine manufacturing initiatives, examining local manufacturing and servicing opportunities for those components.

We talk a lot about the Collie transition, with our state government's commitment to retiring coal-fired power generating stations by 2030. This whole energy transition is happening outside Collie. I commend all local governments around there dealing with a lot of renewable energy projects at the moment and all the work they have

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done towards developing their planning policies and a lot of these big projects. Narrogin, for example, probably has \$2 billion worth of renewable energy projects in the pipeline, and it has shown that it can really be a potential hub for the future clean and renewable energy industry. There is a \$500 million solar project. There are two wind energy projects worth \$800 million and \$500 million, as well as a big \$250 million biodiesel plant. All these projects together are really going to be a good boost to regional places like Narrogin. We are working right now to look at how we can accommodate some of the construction camps required for these big projects and how local governments can retain a legacy from these construction projects for which a lot of this development is happening. It is not up north, where there are remote places with mine sites. There are a lot of towns around the sites of these construction activities where we can accommodate people. These towns should be able to get a legacy out of some of the construction that will happen to accommodate these construction workers, as well as the housing required for people to be in the towns to run this renewable infrastructure. I think we will get some really good outcomes.

We talk about energy security, and I want to mention the government's investment in and commitment to our electric vehicle charging network with the move to these vehicles. Our EV network is the longest in Australia and one of the largest in the world. We have committed to 98 charging stations across 49 locations, covering 7 000 kilometres from Kununurra to Esperance. I commend the government. We are halfway through that process now; we have reached the halfway mark. Esperance has its four great new charging systems where people can fast charge in 20 minutes. People with electric vehicles can now have confidence that they can make it all the way down to Esperance, as there are many places such as Ravensthorpe, Jerramungup and Lake Grace where vehicles can be charged quickly. I commend the government for that and the policy it has developed to support electric vehicle infrastructure to make sure planning is done well and considers EV needs in all our new development projects moving forward. We are making sure we take a coordinated and streamlined approach to the approval of EV charging infrastructure, which will be very crucial for the future.

I also want to say how great it is that all our central area transit buses are transitioning to electric and that we have a commitment towards electric bus charging stations. We have engaged JET Charge through a contract worth \$1.65 million to build this electric charging infrastructure. It will be very exciting when the first new electric CAT bus starts this year. I feel very good about that.

I do not have that much longer to go, so I want to talk about our big investment in clean energy, and part of this is what Hon Dan Caddy talked about. There is \$3 billion in our state budget to help transition our energy system to a low-carbon future. Of that, \$700 million will go towards the south west interconnected system. These upgrades that will happen are really important. I talked about the huge number of wind farm development proposals around Collie to help us with our energy transition. I commend the government on establishing PoweringWA, which will coordinate the delivery of the new electricity infrastructure at the pace needed for our decarbonisation. This is really great. The government is really getting on with positioning Western Australia as a clean energy powerhouse. Earlier this month we announced that we are proposing a new clean energy centre of national excellence here, which is fantastic. It will help with our energy transition and skills development and will make sure we have people trained and ready to help with this big transition. It is expected to be worth in the vicinity of \$200 billion and generate around 350 000 jobs between 2025 and 2050.

I think members all remember the WA Energy Transition Summit we had just before Christmas. Again, that was another great initiative of our government and brought together key players to discuss WA's role in our energy transition.

The last thing I want to mention is our investment attraction fund, which is open now. We are putting \$60 million into a new industries energies funding scheme to basically drive investment into new energy projects. That expression of interest is open now. There is funding for projects for batteries, critical minerals processing, renewable hydrogen and advanced manufacturing in wind and solar, along with carbon capture and new storage. If members know any businesses out there that can apply for this, there is \$60 million available. I commend the government on all its great initiatives.

HON DR STEVE THOMAS (South West) [12.08 pm]: It seems like it is an energy day. Let us make it a high-energy day! A number of things have been said. This motion concentrates on batteries and battery storage, so I propose to spend most of my time dealing with that issue, but I am happy to diverge to other issues as we get the opportunity. The government has invested more in battery storage, which is a good thing. I have said repeatedly that my policy around energy is that we need to transition to a lower emissions future, as I think everybody agrees. I have committed personally to the target of net carbon neutral by 2050, as has the federal opposition and just about everybody else. I think that we are well down that path. The question we are debating is how we get there and how we deliver this. The government's current plan has problems. It has insufficient generation, not enough distribution and not enough storage in its plan. Those three components of the transition are well underfunded and wholly inadequate.

Let us look at batteries, because I want to focus on this for a bit. The government has said that it will ultimately expand its battery storage. There is currently 200 megawatt hours in Kwinana big battery 1, 800 megawatt hours

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will be added with Kwinana big battery 2 and 2 000 megawatt hours with the Collie big battery system. There will be 3 000 megawatt hours. Hon Dan Caddy used the measure for big battery 1 at Kwinana at 160 000 hours for two hours. We have to be careful about its numbers, because it obviously takes a fairly optimistic view on how many hours there are. With 200 megawatt hours at Kwinana battery 1, 800 at Kwinana battery 2 and 2 000 at Collie, it has 3 000 megawatt hours. At about 7.30 on Thursday night, which was not a hot night, consumption was 2 900 megawatt hours. If we have no other energy generation, we will have enough to run the south west interconnected system for an hour and then everything, including the lights, will go out. Obviously, that is not how the government intends that to happen.

When we look at other generations, we see that we have coal, gas and renewable generation. On a relatively still night, we are generating almost zero renewables. Not zero, but not very much. As the 900 or so megawatts of coal-fired generation will be closed down by the end of 2029, we will be relying on gas for what we used to call base load, which is now called dispatchable energy. We can get up to 2 000 megawatts of gas, but if there is a disruption to that, we will have a real problem on our hands, particularly once the government closes down those coal-fired power stations. With some maintenance, 1 800 to 2 000 megawatts can be pumped out every hour with the rest of the gas units going. Some of those will expire in the not-too-distant future. If we need 3 000 megawatts of additional energy on top of our gas supply, its 3 000 megawatt hours will give us another three hours. We will have to start having brownouts and blackouts three hours down the track. The simple issue is that the government has some options that it needs to face. Its current plan is completely inadequate, and I think Hon Dr Brad Pettitt will say something quite similar. The current plan is inadequate. If it is only going to have 3 000 megawatt hours of battery storage, it will need a massive increase in generation capacity of maybe ten-fold. Wind-generated power will add only 410 megawatt hours. I would be interested to see whether the government privatises that like it privatised the previous wind generation, but let us see. It will probably need 10 times that amount, with 4 000 megawatt hours of wind to get even close to the delivery of a reliable system by the end of 2029. We are not even close to that.

At estimates yesterday, which Hon Dan Caddy was at, on distribution I questioned the 4 000 kilometres that was originally put out in the whole-of-system plan for energy, and the answer was that it does not really know. We will do the work. If it is 4 000 kilometres, at between \$2 million and \$8 million a kilometre, that is another \$8 billion to \$10 billion that is completely unfunded at this point, because as we heard yesterday, the \$3 billion from the federal government is going mostly into the north west interconnected system. The government has insufficient generation and massively insufficient storage. I want to make some of these comments around Collie in particular. I knew the previous member for Collie–Preston, Hon Mick Murray, who was a champion for the coal industry in Collie. He walked into Parliament with a wheelbarrow full of coal, as I remember. The current member for Collie–Preston, Jodie Hanns, appears to be completely lost. She is not a champion for the coal industry, not even really a champion for Collie. The coal industry has been abandoned in Collie, and the transition plan is not working. She is asleep at the wheel because the transition plan is not working and the people of Collie understand that. The transition plan is not working. The government is shutting down coal in Collie. Yes, it is building a 2 000 megawatt hour big battery in Collie. That is a part of this transition, which we all need to embrace. Well done; it is building big batteries. Congratulations. But it is absolutely not replacing jobs in Collie. Once that big battery is built, almost no jobs will be associated with it and it will largely be remotely run and monitored from Perth. Who is building it? Who is going to manage it and monitor it? It will come out of Perth, so almost no jobs will go back into Collie. It is a tough transition. The government's current time frames do not work and Collie is the victim of that.

It gets worse than that. I think Hon Dan Caddy said that the government is investing billions of dollars into this transition and it is and that is well done. It is putting a quarter of a billion dollars into a subsidy into Griffin Coal Mining Company to subsidise the fact that it does not want to increase the price, because it has a problem in Collie, a problem in the coalfields and it does not want it to fix it.

Hon Dan Caddy interjected.

Hon Dr STEVE THOMAS: A nuclear plan? That is very good. He raised nuclear plans. Hon Darren West said earlier that there are no small modular reactors.

Hon Kyle McGinn interjected.

Hon Dr STEVE THOMAS: I am coming to the answer, I do not have a lot of time, Hon Kyle McGinn.

The issue about small modular reactors is that no commercial ones are available at the moment. The first one is being trialled in Canada. I have said repeatedly, publicly and I will say it again: any new nuclear reactor in Western Australia will need to be of a size to fit into the Western Australian marketplace, which will need to be around 300 megawatts, which is the size of the largest of the coal units, the Collie coal unit. We would not want to make it any bigger than that, because when it goes out, we would have a problem. The currently economically viable power stations are, in my view, 2 000 megawatts-plus. We might get down to 1 000 megawatts, and again,

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a couple of those are being constructed, but right now, small modular reactors are not commercially viable. They may well be in some time and the state of Western Australia should look at them if that occurs.

What will happen is that the Labor Party will close down all coal-fired generation. It seems to be absolutely attacking and undermining the privately owned Bluewaters' coal stations as well. It is refusing to allow it to even tender the replacement contracts for Synergy and Western Power. I assume that this state government putting Bluewaters Power Station out of business in 2026 seems to be its plan. Again, Hon Dan Caddy was at estimates yesterday when Synergy said precisely that. It expects it to be gone by 2026–27. With the active government campaign to get rid of it, it will probably be successful. All of that coal getting removed will be gone. A replacement in nuclear will take 10 to 20 years at the very least.

Hon Kyle McGinn: When does the Liberal Party want to close Collie?

Hon Dr STEVE THOMAS: I am on the record in my opinions on the 2021 policy—that policy does not exist anymore.

Hon Kyle McGinn interjected.

The ACTING PRESIDENT (Hon Steve Martin): Members! Thank you.

Hon Dr STEVE THOMAS: There will be no immediate nuclear power station in Collie, but there will need to be a massive increase in investment by this government in generation and storage. Well done—it has 3 000 megawatt hours on the books. It will either need 10 times as much generation from wind and solar or it will need 10 times as much storage and it will need to increase its distribution network, all of which in my view is at least a \$15 billion exercise that it has not funded. Before the government starts congratulating itself on its transition, its members need to understand and admit that its current transition plan does not work and will not work.

HON KYLE MCGINN (Mining and Pastoral — Parliamentary Secretary) [12.18 pm]: It is good to hear the word “transition” from the opposition, because in 2021 I did not hear that word as part of the Liberal Party policy for what it wanted to do with Collie at the time, which was to shut the door and walk away. Was that the policy? That is how it was put across by the opposition. I think the leader at the time, Zac Kirkup, wanted to close the door and walk away instead of having a just transition. Let us be honest.

Hon Dr Steve Thomas interjected.

Hon KYLE MCGINN: That is fine. Hon Dr Steve Thomas has always spoken his mind, and good on him, but the party that he is a part of wanted to close the door and walk away. The party that I am a part of has been transitioning and working with the town to make sure that there is a future, and I am very, very proud of that. I could get stuck into that one, but I will briefly talk about a great project that I had the pleasure of going out to yesterday, and that is the Bellevue Gold project. This is a really great story that sits in line with the motion today, which I thank Hon Dan Caddy for bringing to the house. This project is north of Leinster where Bellevue has been doing a lot of work. The mine site that it has now reopened originally started mining in 1900 then closed in 1996. Bellevue did a fair bit of work to resurvey it to see whether there was still gold in the area. It turns out—using the exploration incentive scheme, which is a fantastic scheme—that it discovered three pockets of gold between 2017 and 2019. It has now got over \$252 million worth of investment to restart the mine.

The reason I am bringing this up during this debate is that Bellevue Gold is also trying to achieve a couple of really good things. The first thing is the way Bellevue has worked very closely with the Tjiwarl Aboriginal Corporation has been fantastic. Colleen was out there yesterday doing a welcome to country. It was amazing to see that there was genuine engagement with the First Nation people of the land, and that there is a future out there for them to protect their land. The second thing is that Bellevue has a target to have net zero emissions on the mine site by 2026. It has a target to create “green gold”. Bellevue wants to be running off the grid with net zero emissions by 2026, and it is on target to do that. Running completely off the grid is something that should be commended.

Hon Dr Steve Thomas: What is their demand? What is their total energy use?

Hon KYLE MCGINN: I do not know off the top of my head. If I find out, I will let the member know. But Bellevue is a decent-sized mine; I can say that. Yesterday there was a fair bit going on. But basically it is looking to produce 1.8 million ounces of gold over the initial 10 years of the mine, with a mineral resource of 3.1 million ounces at 9.9 grams a tonne, which is pretty impressive. This is a great story in respect of going back to somewhere that was explored so long ago and utilising the exploration incentive scheme process to create 230 jobs, which is fantastic. Bellevue aims to be net zero, as I said, by 2026 and have the lowest greenhouse gas intensity of any major gold project. This will allow the company to market what it is going to call “green gold”. People are starting to wonder where things come from and there seems to be a bit more of a price tag sometimes on creating a new market, and Bellevue has really focused on saying that it wants to be leading the world on green gold. I think it is very admirable. Darren took us out there yesterday and when he got up and opened the mine, he thanked every single person involved

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with it—the contractors, the workers and the vision put forward create it. I know there are more speakers waiting. I could talk about this a bit more, but I thank the member for bringing the motion to the house.

HON DR BRAD PETTITT (South Metropolitan) [12.23 pm]: I rise quickly at the end of this debate just to make a few comments. I want to thank Hon Dan Caddy for bringing forward this motion. It is true. If there is one success in what has happened in the energy space, it is big battery storage. But, as Hon Dr Steve Thomas says, we are not there yet. If the storage is a success, then transmission and generation are the glaring holes and batteries alone will not plug the gap.

I want to give some key reasons for this concern. I want to look at the really good work that has come out of key commentators in this space, and some very interesting reports have just come out in the last couple of days from the Clean Energy Council and others. The *Clean Energy Australia 2024* report came out only yesterday, and I encourage people to look at it. The report clearly states that the pipeline of generation is going to close. This is the fundamental point that I have. We are not only talking about state coal closures; the Australian Energy Market Operator also said in the last week that Bluewaters is expected to close as well.

Hon Dr Steve Thomas: Based on the government action.

Hon Dr BRAD PETTITT: That is based on government action.

Hon Dr Steve Thomas: They're driving it out.

Hon Dr BRAD PETTITT: The Bluewaters closure is coming forward to 2026. Potentially, by the end of this decade, we will have the full closure of all coal, which will require a huge amount of new renewable energy to come onstream. That is where we should be absolutely concerned.

Hon Dr Steve Thomas: Or more gas—the Liberal plan for more gas.

Hon Dr BRAD PETTITT: Or it could be more gas and there is a Liberal plan for more gas. This is the fundamental difference and a really important point. This is the cross to carbon capture and storage, as we just heard. The dream of CCS should be parked right next to the dream of nuclear energy because they are both as uneconomical and unviable as each other. In fact, a key graph that all members should be looking at is the levelised cost of energy. If anyone is interested in where we should invest, the answers are clear.

Hon Dr Steve Thomas: Whose version of it?

Hon Dr BRAD PETTITT: I am looking at the Our World in Data version. Members can look at the levelised cost of energy there. Wind energy is about \$46. Solar energy is about \$45. Nuclear energy is going up in the other direction, somewhere north of \$100.

Hon Dr Steve Thomas: The big station is about a hundred.

Hon Dr BRAD PETTITT: It is about a hundred. But if we are serious about that, we should invest in renewables. My plea to the state, knowing that Hon Dan Caddy wants to get up and say some words, is to let us get on with it. Let us get our foot off the hose. Let us stop the bottlenecks that are occurring in the transmission space and the approvals space. WA has the best opportunities, but the evidence that all the experts in this place say is that transmission is currently not there. We are doing well in the storage space, as this motion suggests. Now let us get on with the transmission and generation.

HON DAN CADDY (North Metropolitan) [12.26 pm] — in reply: I will just finish off quickly. I want to thank the members who spoke on the motion and give some comments. Hon Darren West, whom I failed to mention earlier, was in the room yesterday as well. I said I knew I had forgotten someone.

Hon Dr Steve Thomas interjected.

Hon DAN CADDY: Well, he was on the other side.

It was great to listen to Hon Darren West's contribution. He is not only passionate about energy security, but also a very knowledgeable parliamentary secretary to Minister Whitby, and so it was educational to listen to what he had to say. I thank my good friend Hon Stephen Pratt. I love a good story in which the Autobots win despite the best efforts of the Decepticons. It was an interesting contribution and one well worth listening to. Hon Shelley Payne's take as a regional member on the work that is being done in our rural communities was fantastic, as was her summation of the clean energy investment that this government is making and the way we are tackling this issue head-on.

I am glad to hear that Hon Dr Steve Thomas's commitment to a lower emissions future and carbon neutrality by 2050 is strong, even if we disagree on the path on the way to get there. I also acknowledge his knowledge in this area despite our differences. He bravely brought up privatisation again, and I will not mention that because I do not think we have time. We have already been down the rabbit hole; Hon Dr Steve Thomas is nothing if

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not consistent. I will take issue with one thing that he said and that was his summing up of the member for Collie–Preston. Jodie Hanns, MLA, is an exceptional member. She is a complete champion for Collie and a complete champion for her electorate. I do not think anyone down there, even those people who maybe did not vote for her, would say otherwise because she works extremely hard, so I will take exception with those comments. I thank the final two members who spoke as well: Hon Kyle McGinn and Hon Dr Brad Pettitt. Both spoke briefly and both are very knowledgeable and particularly passionate about this area.

Motion lapsed, pursuant to standing orders.