

RENEWABLE ENERGY

Motion

Resumed from 10 August on the following motion moved by Hon Kate Doust —

That this house calls on the government to stop taking a half-hearted approach to encouraging and supporting the development and uptake of renewable energy sources and to take immediate steps to make sure that Western Australia is at the cutting edge of the use of wind, solar, geothermal, wave and tidal power.

HON KATE DOUST (South Metropolitan — Deputy Leader of the Opposition) [2.07 pm]: At the end of my speech last week I made reference to the conference I was due to attend this morning, the Energy in WA conference, jointly run by the Office of Energy and the Australian Institute of Energy. I must say it was an exceptionally well organised and run conference with a very interesting group of speakers. I look forward to spending some time there again tomorrow.

I was waiting with great anticipation this morning for the Minister for Energy, in his opening speech, to make some comments about the issue that we are currently dealing with today. He canvassed some issues, but I felt the minister missed an opportunity. We need to go back to what has happened over the past few weeks and pick up on the issue of feed-in tariffs. There is a mixed view across the energy industry about a feed-in tariff. For those people who have gone to considerable expense to invest in photovoltaic panels on their roofs, and also those people in the industry who have been working diligently to build and develop a sustainable solar panel industry in our state, which is a job creation industry in our state, it has been a very disappointing couple of weeks.

During the winter break I attended a meeting at the Sustainable Energy Association, together with about 30 to 40 people from that industry, to talk about their concerns. They spoke about when they thought the 150-megawatt cap would kick in. At that point in time they anticipated it may be September at the earliest, October was realistic, and November was probably the latest. Their real difficulty was that there was a lack of consultation. There had been no communication between the government and people in that industry, so there was no way they could get any advice from the government as to when the cap would be reached. They were doing their own measurements, of course, but it was very difficult not having that information from the government. On Monday, 1 August, I recall very clearly that I had just dropped my daughter off at UWA. It was early in the morning and I was listening to Minister Collier on 6PR, talking about how the government would monitor the situation and look at how it was going. I thought that that was hopeful and that it meant he might actually go back and talk to the industry to work out a plan about how it could manage the change and the cap that might be reached sooner rather than later, and what we could do about having a sustainable industry. Then, within minutes, I switched over to the ABC and heard the minister on that radio station as well, but he was singing a different tune; he was now announcing that he was going to suspend the program as of that day. I thought to myself, “What happened between switching from 6PR to the ABC? What happened to the minister within that matter of minutes going from monitoring to suspension?” I do not think the minister has been able to articulate that. The Premier came out and said, “Well, once it hit the front page of *The West Australian*, we had to do something about it”, and I thought to myself, “Oh joy. If that’s how we can get this government to actually do things, let’s get more front pages about issues that are important to us or to the community, and maybe we can get the Premier to change his mind on a few issues”. Unfortunately, that is not how it works.

The real issue, which has been articulated very clearly by the industry and its advocates in the peak body, the Sustainable Energy Association, is consultation. This is the matter on which the industry has been caught short, simply because the government did not bother to sit down and do it the courtesy of saying, “Listen, this is where we’re at. You need to be prepared. We’re going to reach the cap sooner rather than later, and we’re going to shut it down”. We have already heard from the industry about the impact on its businesses and the fact that a number of them will either go out of business or have to cut back on staff, and a number of them have already had to turn away containers of panels. There was an announcement in New South Wales today that one of the large solar panel installers will have to shut up shop. That is not just because of people purchasing panels from overseas, but largely because of a change in government policy. The fellow from the company who was being interviewed said that as a result of the government policy in New South Wales of cutting the feed-in tariff, the solar panel industry was now in chaos. I watched that today and thought, “Really, that is of concern, because if it’s happening in New South Wales because of a sudden government decision to shut down the process, it could happen in WA”.

Householders have grabbed onto this issue. They want to be environmentally friendly and they want to save money by making that investment. The feed-in tariff was not about people making money. I think I heard the minister on the radio talking about how it was not about making money, and I agree with him; it is not about people making a profit out of this, it is about people doing whatever they can to reduce their excessively high

power bills. I think people have been very excited about these opportunities, as they are about other types of renewable energy opportunities in WA.

The minister has a lot of explaining to do about why the industry was not consulted and not advised, and why there was no ongoing dialogue leading up to that decision. Why was it such a snap decision? On one radio station the minister said the government was going to monitor the program, and within minutes he was on another station saying that the government was going to shut it down.

I asked a question in this place about a week ago about what the government was going to do, now that it had suspended the program. The minister said that the government was going to review it. Today he missed the opportunity to say how he was going to review it and what options he was going to put in place. He could have talked about the renewable energy buyback scheme amount. The New South Wales equivalent of the Economic Regulation Authority this week launched an inquiry into the REBS rate to see whether it is an appropriate rate over there. Whatever figure it comes up with might be appropriate for the eastern seaboard, but because of our different arrangements here it might be a different rate.

Today the minister could have taken the opportunity to announce an inquiry into the REBS rate, and that would have created an opportunity for the government to have dialogue with the industry and talk about what it thought was an appropriate rate going forward. We want to ensure that we have a sustainable industry in which people are employed and in which we develop better technologies. I had the opportunity to go out to one of the solar panel sites a couple of weeks ago. I was taken through some information about the types of products and the changes in technology. There are opportunities for us here in Western Australia as well, and this comes back to one of the matters I canvassed last week. One of the gaps in this government is where it is going in research and development for renewable energy. I think we can pick up on that in our solar industry as well. There has been a real let-down on the part of this government, and it demonstrates the half-hearted approach referred to in my motion in the way in which it has managed the whole solar panel fiasco in Western Australia.

I know the minister will stand and do his regular song and dance, and bombard us with statistics and history as he did today, but at the end of the day it is about more fundamental things; it is about consultation, dialogue, planning and working out how these things fit in. That is not just so that industry can be engaged, but so our community and householders can be engaged as well. It is about moving forward into the future.

The minister has made a lot of comments about reviewing this program, and I hope that today he will take the opportunity when he gets to his feet to canvass with members of this chamber where he sees the feed-in tariff going in the future, or what other alternative options he may be considering putting in place to replace the option he has removed.

I have had a number of calls to my office from people who have just purchased panels or who are thinking about purchasing panels, asking what they are going to do. I take the view that if they really want to make that commitment, they should go ahead and do it because at the end of the day, over the long term, they will gain the benefit. The minister has shut the door on that feed-in tariff, and a lot of people would have had to make a fairly substantial decision about their investment. They may have had to pull money from all sorts of places, because not everyone has a spare 10 or 12 grand, or whatever it takes, to buy panels. It is a big investment for a lot of families. The minister is saying that people will still achieve the return on their investment over time, but for a lot of families, removing the feed-in tariff may actually shut the door on their opportunity to make that investment, because it will take a lot longer to get the return. The minister needs to stand and explain to the industry and the community what the alternatives are and what he is going to do about it.

We all know the politics; this came about because the Liberal Party needed to fill the gap in energy and be seen to be environmentally friendly. The minister this morning referred to his party as philistines in the area of renewable energy, and I think that was the one point on which I actually agreed with him!

Hon Peter Collier: That is the perception.

Hon KATE DOUST: Well, I think that perception is out there, and the fact that the minister noted it is quite interesting!

Given the nature of the last state election and the brevity of election promises, the Liberal Party simply matched the Labor Party's election commitment. The government now talks about how it only did it because of the Labor Party. At the end of the day, yes, it was election commitment. We did not get elected, but nobody held a gun to the government's head to proceed with that commitment. We have seen a shift over the last three years from a gross feed-in tariff of 60c, to a net feed-in tariff of 40c, and another drop to 20c in May of this year, to a cap. Then, without any notice at all, we had a shutdown. In fewer than 12 months since the minister made the announcement about the reduction of the net feed-in tariff to 40c, he has shut it down. The minister has had three years to get it right. I do not know who in either the Liberal Party's or the minister's office is responsible for getting something going, but I would have thought that having made such a hoopla about being environmentally

friendly, wanting to do the right thing and engaging in renewables, the minister would have better thought through this decision. Both the minister and the government have been caught short because they have not done the solid groundwork to properly deliver this program into the community. I look forward to hearing the minister articulate his response and outline his vision for the future about how people will be able to afford to put solar panels on their roofs and how the industry can become sustainable, given that large numbers of them will have to cut back in all sorts of ways. It may take them a long time to get back on their feet. Ray Wills from the Sustainable Energy Association of Australia made some very interesting comments in the media when he talked about government policy being made on the hop. The government changes its position and policy every three months, which does not give the industry an opportunity to either catch up or plan for the future. Ray's comments were very succinct and on the money. If the government is to put in place these sorts of election promises, it must think through the implications. When the government made its announcement at 8.30 or 9.00 on the Monday morning, I do not believe it had thought through the implications its decision would have on the people who work in the industry. They have to pay their mortgages, feed their kids and pay their bills. I am sure that some of those people have been laid off since that announcement was made and do not have the money to pay for those things anymore. I do not know whether the minister thought through the implications the decision he made would have on the people who either had invested or were contemplating investing in purchasing solar panels. The decision the minister made on that day also puts into play the government's other commitment to look at feed-in tariffs for small commercial operations and retirement villages. I am interested in knowing what the minister will do about that now. Is it still off the table? The opposition has heard from retirement villages in particular. Some people who have put solar panels on their homes are ineligible for a feed-in tariff under the old arrangements because of the nature and structure of the billing arrangements for those types of residences. The minister has taken the community and the industry a step or two backwards simply because he has made a kneejerk decision without having given any thought to the implications. This decision was made swiftly. When did cabinet decide to shut it down? The minister made the announcement that the 150-megawatt cap would kick in, so there must have been some discussion in government about how to manage that. These types of things cannot be managed by making announcements on radio stations. It all comes back to the government's lack of consultation.

I will move on because I want to canvass other matters in the remaining 16 minutes. A petition is being circulated in the community calling on the government to look into the solar panel industry and the feed-in tariff. I thank members of the solar panel industry, their customers and concerned members of the community who are very eagerly signing that petition. I alert the minister to what I thought was an excellent opinion piece in *The West Australian* on Tuesday, 9 August by Mr Jamie Ally. I encourage the minister to read it because Mr Ally is the executive of a Perth-based service provider for clean energy and carbon abatement. His article articulates very clearly the interests of the industry and its concern about the impact the government's decisions are having on the community. Some of my colleagues might also refer to this excellent article. It would be worth the minister's while if he ran his eye over it and picked up on some of the comments Mr Ally made.

The government's approach has been half-hearted. The issue is not about having a wind farm here, a solar farm there and some wave technology off Garden Island. That is important and it is great that it is happening, but the issue is about having a coordinated plan for how renewable energy fits in with the other fuel types that we use, predominantly coal and gas. That is what is missing. It was interesting sitting in on a conference this morning at which I listened to Mr Michael Kerr from the Western Australian Office of Energy refer to the responses to the draft strategic energy initiative. He said that 87 submissions referred specifically to renewable energy. The main comment that has been made about the SEI document is the lack of commentary in it on renewable energy. It is interesting that people have responded by asking what the government is doing about renewable energy and where it is placed in the picture. The total number of submissions received was 157, and 87 of those focused on renewables, which is quite a substantial number. I hope that the Office of Energy and the government take that response on board. Hon Robin Chapple was also at the conference. Mr Hartley, from a United States university, also spoke at the conference. He said that one of the problems with renewable energy sites is their remote location. Because they are remote, the transmission access must be extended and it becomes very expensive to access that form of energy. A small number of predominantly wind or solar renewable energy plants operate in Western Australia, usually away from the populated areas. The government must seriously look at the placement of those plants and at how they are connected. Western Australia is a vast state that has an excellent opportunity because of the availability of renewable resources. We should be able to work out ways to locate renewable energy plants not just in isolated places such as Marble Bar, Nullagine, Merredin or Carnarvon —

Hon Robin Chapple: You can't build in Carnarvon any longer.

Hon KATE DOUST: That is right, and I am getting to that.

Part of the approach we need is how we can deal with renewables in not only metropolitan areas, but also large country towns. Why can we not look at placing solar panels on the roofs of public housing and industry? Why

are we not looking at wind turbines or producing geothermal energy up and down the city or in Fremantle? A couple of projects are on the boil—literally—at the University of Western Australia and Curtin University. We should be planning for which renewable energy resources will be available, how we will bring them onto the energy grid, where they will be placed, what we can get the best use out of, how it will work with everything else and how it will mix with the grid, not just for five or 10 years from now, but up to 30 or 50 years from now. Carnarvon is important because solar panels can no longer be put on roofs there because the capacity was reached a couple of months ago. Last week I briefly touched on how the government proposes to deal with capacity issues as renewables are brought into —

Hon Robin Chapple: The minister has left the chamber.

Hon KATE DOUST: Unfortunately, the minister has been called out of the chamber, but I am sure that he will be listening.

The capacity issue is very important. We have seen what has happened in Carnarvon. I am sure that the people in Carnarvon are disappointed that they cannot engage with renewable energy. I think the issue of capacity is tied in with the issue of the need to have the infrastructure there to support the renewables. I know that we have talked a number of times about the importance of upgrading the 330 kilovolt transmission line through Geraldton to not only have security of supply for the town of Geraldton, but also ensure that the mining companies and renewable companies that are developing up and down that zone are able to access the grid. I refer to the *Geraldton Guardian* on 3 August 2011, and the headline “Nationals launch push for new grid”, under which I saw a lovely picture of what I refer to as the “troika”—namely, Grant Woodhams, MLA, Hon Philip Gardiner, and Hon Max Trenorden. I congratulate them in their push for renewables and trying to continue to put the pressure on their government colleagues to upgrade the 330kV.

Hon Max Trenorden: There’s a fantastic opportunity there, and I’ll tell you all about it some day, but, unfortunately, it will not be today!

Hon KATE DOUST: Maybe next time we sit then; I am sure Hon Max Trenorden will entertain us enormously with that.

I think it is great that those members are going out there and pushing for those things. I know that both Hon Max Trenorden and Hon Philip Gardiner are the new warriors for renewable energy, and whenever I go to a number of the forums, they are certainly up there in the front row and are very enthusiastic. At least on the government side of the benches we have some people who have an enthusiasm, if members like —

Hon Robin Chapple: And a vision.

Hon KATE DOUST: And a vision—I thank Hon Robin Chapple very much—for where Western Australia could be if it had a realistic and well-thought-out plan for how to get renewables into our energy market and ensure that we can deal with the issues of capacity and infrastructure. Of course, these things do not come cheaply. There has to be solid investment on the part of the government —

Hon Robin Chapple: And planning.

Hon KATE DOUST: And planning, and engagement with the private sector. I know the minister will get up and talk about all sorts of projects that this government says it has been involved in. I am pretty sure that once he gets up, I can go through all of the press statements he has put out about these various projects and tell members which have had some state government funding, which have had lots of federal government funding that this state government has taken credit for, and which have had private funding. It is not just about putting a name on a press release and claiming credit for it; it is about being engaged with it. The minister again referred to the investment in Carnegie Wave, which is fantastic and they are doing a very exciting piece of work, but it is not a state Liberal government initiative. It was commenced under the previous government, and all this government has done is to hold fast on the commitment, which is very important and I am very glad it did that. But the government should not take credit as though it something new and something it has done off its own bat.

The minister said he would have liked to have presented the state energy initiative today, and we look forward to seeing what he has come up with. I know a number of people in this chamber will be looking with great interest to see what sort of detail is in that plan that the minister is so enthusiastic about. As the minister said this morning, it is not the gospel according to Pete; it is the gospel according to the community about what will happen with energy in this state. I would hope that the minister has rectified the gaps in that document about renewables. I would hope that given the response from community and industry, the minister would have upped the ante on engagement with renewables in this state, that it will not be a half-hearted approach, and that our focus will not be just on gas or just on coal and all opportunities afforded to us have been taken into account. We have a great range of opportunities, and I think as our knowledge gets better, our opportunities will become greater. Also, over a period of time, of course, the issue of cost associated with renewables will hopefully

decrease as well, which will make them even more attractive and better to access, because that has always been perceived as a barrier.

The government needs to start talking up more—not just a case of statistics and, “We’ve done this and we’ve done this and we’ve done that”—about how renewables fit into the grand scheme for the future of energy in our state. I think that has been missing. I think that is what the minister should have talked about this morning, rather than going through the blame game, the history, and what he has done in the past 12 months.

On this issue the community certainly gets it. It is not something it is still thinking about; people are fully engaged. The minister said today that when he goes to schools and talks about these issues, children are picking up on them. That next generation is going to be even hungrier for solutions to how we deal with these types of issues. I think the government has to be able to articulate very clearly to the community what it can expect of the minister and his government into the future on the handling of this issue. It is not just how we access power or what form of energy we access to turn our lights on; it is how all of the other issues come into play.

There was some discussion at the conference this morning about electric vehicles, which is an issue that is being looked at in a few workplaces in our state. In different parts of the world, electric vehicles are being trialled either by governments for their fleet, or they are looking at how they manage battery transfer or charging stations, and I think that is a very exciting prospect. One of the speakers this morning referred to the fact that in due course, as this change comes through, it is expected that a two-car household will have an electric car for commuting, and the other car will use another form of fuel for longer distances. We are already starting to see people changing the types of cars they are buying, and starting to look at those sorts of options. When a number of us were in Israel last year, we all had the opportunity to go to Better Place and drive the electric cars, which was a very interesting experience. There is certainly a big push for those types of vehicles. People are also saying that electric cars may actually solve some of the issues attached to renewables, in terms of picking up and using the excess energy generated at non-peak times. I think there are lots of exciting opportunities; we are just not hearing enough about them.

We are not moving a motion condemning the minister; we are just saying there has been a fairly half-hearted approach taken and the government needs to up the ante. It needs to articulate, in the first instance, those issues associated with why it has shut down the feed-in tariff and the implications for the industry. I think the minister also needs to articulate how the government will deal with the carbon tax that we have coming our way. It was interesting that, today, Lyndon Rowe from the Economic Regulation Authority talked about how the ERA stated in its reports that it thought the carbon tax was sensible, but it had difficulty with all the other programs that were being run alongside it. I think he used a word like “renters” or something; it was an interesting discussion from Mr Rowe today on these matters.

I think that it is a real shame we do not have a longer time. I do not know whether one of my colleagues will talk about this at a later stage, or I might talk about it when I come back in response, but I would really like to see a full-on parliamentary inquiry at some point, during which we can canvass all the issues associated with renewable energy in our state and look at the best ways that we can incorporate it here and put it into play and put some positive recommendations to government about the way to move forward on this. The minister and I have had some brief discussions about this, and I know that there is some enthusiasm from people to do this, but I think if the minister was really dinkum about engaging in this area and had a vision for renewables in this state, he might consider that as an option as well, so that there can be a much broader engagement from community and industry in looking at all of the other options, too.

I look forward to the minister’s response, particularly on the feed-in tariff. There will be many opportunities to talk about renewable energy in this state, but at this point in time I do not think that the government is doing enough and more needs to be done.

HON PETER COLLIER (North Metropolitan — Minister for Energy) [2.40 pm]: I thank Hon Kate Doust for putting this motion on the notice paper. Having said that, the Liberal Party will not be supporting it for the real reason that the wording insinuates that the government is taking a half-hearted approach to renewable energy, which does not reflect the reality of the situation.

Hon Ken Travers: If we toughened it up —

The PRESIDENT: Order! Let us get one thing clear at the outset. We have just listened to one member on her feet without one interjection. It took about 15 seconds for the first interjection to come when another member got up. Let us proceed with the same conditions and responsibilities for everybody.

Hon PETER COLLIER: Thank you, Mr President, I appreciate that. The Liberal Party will not be supporting this motion because it does not reflect the reality of the situation. However, I would like be to given the opportunity to go through with my intention of articulating the achievements the government has made in the

renewable space. I am proud of those achievements and it is incumbent upon me, as Minister for Energy, to outline exactly what we have done and to respond to a couple of the points that Hon Kate Doust has mentioned.

I say at the outset—I have said this on a number of occasions—that the Liberal–National government is a proud signatory to the national renewable energy target of 20 per cent renewable energy by 2020. I am proud of our contribution to that, and we are going to do everything within our capability and capacity to ensure that is achieved. The Labor party does not have similar standards. If I take the Labor Party’s mantra from May 2007 “Making Decisions for the Future: CLIMATE CHANGE” the then Premier said —

Renewable Energy Target

The State Government is committed to the increased use of renewable energy as a readily deployable, safe, zero emissions technology that provides enhanced energy security.

The State Government will establish a Renewable Energy Target (RET) of 15 per cent by 2020, and 20 per cent by 2025 for the SWIS.

In laying claim to being the proponent of renewable energy, the opposition needs to look at its own policy because its standards are not as high as the government’s. I readily acknowledge it is not going to be an easy task. If we ask anybody in the energy space exactly what the situation is with renewable energy, they will tell us—I have said this over and again: it is not just having wind farms up the length and breadth of the state; it is having a diversified portfolio to ensure a multifaceted approach to renewable energy, and if we move away from fossil fuels, it is important that we have baseload capacity to fill that space. Having said that, I am cognisant that it is going to be difficult. I said that to a couple of journalists today. That was reinforced by a report by the Auditor General in November 2007 in which he stated, based on the assumption of the Labor Party to have a renewable energy target of 15 per cent by 2020, that there were sufficient renewable energy projects in development to meet the 15 per cent renewable energy target for the south west grid, but achieving the 20 per cent target for 2025 was less certain.

It is interesting that the Auditor General said that. He said that it is going to be difficult to get to 20 per cent by 2025. Our contribution to the national target is 20 per cent by 2020. The Auditor General has articulated, quite logically I think, some reasons why that may be difficult to achieve. He said —

There are a number of factors that make achieving the 20 per cent target less certain, particularly as this target is nearly two decades away.

There are limits to the potential levels of wind energy on the grid

After hydro power, wind energy is the lowest cost, most highly developed renewable energy technology and hence also the most widely used to date. However, wind alone is unlikely to provide enough energy for all power needs because it is variable and the network has a limited tolerance for variation.

High levels of wind power may also require higher levels of back-up power from gas or diesel turbines which would add to energy costs and required investment levels. Western Power believes that greater than 10 to 15 per cent wind energy on the network may result in significant additional operating costs from running gas turbines to counter variations in wind farm outputs and having to shut down base load plants overnight. Western Power is concerned that, in the absence of an up-to-date assessment of costs and benefits, the impact of substantial amounts of wind energy on the South West Grid are uncertain. While there is disagreement in the industry about this, Western Power’s position creates a degree of uncertainty about achieving the 20 per cent target using wind power.

Wave and geothermal generators that could provide constant (base load) energy are not yet available

A 20 per cent target may require substantial new sources of base load renewable energy, such as biomass, wave, tidal and geothermal generators. Of these, only biomass is likely to provide significant energy to the South West Grid in the next few years, with wave energy at the pilot stage. However, an expansion of biomass sources and substantial further development of wave, tidal and geothermal energy is expected by the target date.

As I said, it is not going to be an easy challenge; it really is not, but I want to reinforce that the Labor Party’s policy was 15 per cent by 2020, while ours is to contribute 20 per cent by 2020.

Hon Kate Doust: How are you going to do that when you bring Muja on stream?

Hon PETER COLLIER: That is our target, as I said today. I will get on to what we have done in the last three years to show that we are well on track at this stage to make significant inroads.

Hon Robin Chapple: By word of clarification, can you tell me the date of that document?

Hon PETER COLLIER: That is the Auditor General's report from November 2007; it was a response to the Labor Party document of May 2007.

I would like to talk about a number of achievements that we had in the renewable energy space over the last few years. The area that I would like to spend a little time on is the feed-in tariff. Quite recently Hon Kate Doust expressed concerns with the process and the outcomes, and I would like to respond to that. We need to establish right at the outset that it is a national scheme, albeit with each jurisdiction introducing a feed-in tariff. That was decided through a Council of Australian Governments agreement. The federal government did not want anything to do with it; in fact, Martin Ferguson is not remotely a fan of feed-in tariffs. He feels that there are much more efficient ways to generate and stimulate renewable energy within Australia.

Hon Kate Doust: We do not agree with Martin on everything.

Hon PETER COLLIER: As Hon Kate Doust acknowledges, there are some very strong opponents to feed-in tariffs—I can assure her. We were a signatory to that and we agreed that we would introduce a feed-in tariff. Going into the last election, as I said before, we met the Labor Party's commitment—the government at the time—of \$13.5 million for a 60c gross feed-in tariff. That means consumers get paid 60c for each kilowatt hour that is generated from their solar photovoltaics. We met that commitment. After the election, I was appointed Minister for Energy and this was one of the first issues that came across my desk—that we were going to introduce a 60c gross feed-in tariff. As the Labor Party quite rightly said at the time it was the most generous in Australia. It was, but it comes at a serious cost. One of the very first meetings that I went to as a minister was the Ministerial Council Meeting on Energy in about December of 2008—I may be corrected and it may be early 2009, but I am almost certain it was the end of 2008—but, almost to a man or woman, my ministerial colleagues from other jurisdictions spoke to me and warned me or asked me to be guarded about a gross feed-in tariff. They said that it was prohibitively expensive and we would be restricted in the number of houses that we could access. At that stage I came back and we had a look at it, and we decided to go down the 60c gross feed-in tariff path. As a result, that is what we were going to do. But we had a bit of a problem because, as we were about to put in a cabinet submission for the 60c gross feed-in tariff, my advisers came to me and said, "Minister, the \$13.5 million that you have allocated for the gross feed-in tariff will give an allocation to around 2 900 homes and we already have about 4 000 applications." We would have had a Rolls Royce feed-in tariff for fewer than 3 000 homes and, not only that, it was not going to generate the 10 megawatts of capacity that was articulated in Labor Party policy; it was going to produce about 5 megawatts of capacity. We would have had this little boutique feed-in tariff and fewer than 3 000 homes would have solar PVs on them; they would pay off their system in a couple of years and that would have been the end of it. That was Labor Party policy. That is the simple fact of the matter: That is what the Labor Party said.

Hon Simon O'Brien: Is that still their policy?

Hon PETER COLLIER: I do not know whether they still want to go down the 60c gross feed-in tariff path. That would be interesting to find out, and I will go onto that in a moment. That was reinforced by "Labor's plan for green power generation at home — Vision Stability Leadership". It reinforced the fact that the Labor Party is —

Committed to a State Renewable Energy Target of 15 per cent of the south west interconnected system by 2020, and 20 per cent by 2025.

Again, its standards are lower than ours. It also stated that it would introduce a gross residential photovoltaic feed-in tariff of 60c per kilowatt hour. It stated —

This feed-in tariff scheme will significantly boost investment residential photovoltaic systems in Western Australia with 1,000 new systems expected to be installed this year increasing to 10,000 new systems by 2012. This will increase the current installed capacity from 2 to 12 megawatts by 2011-12, an increase of 500 per cent.

Under the Labor scheme of a 60c gross feed-in tariff, at the very most we would have had 10 000 systems by 2012 and delivered around two to 12 megawatts of capacity. That is why we need to put that in perspective. That is the option; that is the alternative.

Hon Kate Doust: No, that's not the alternative. That might have been the alternative a couple of years ago but we didn't get up; you did.

Hon PETER COLLIER: The member keeps asking why we are not going with the gross feed-in tariff. She says that every time she stands up. Does the member still support a 60c gross feed-in tariff?

Hon Kate Doust: No. We support a feed-in tariff, and we will consult with industry.

Hon PETER COLLIER: The member has gone off the 60c gross feed-in tariff. We are rewriting history because Hon Kate Doust has criticised us for not having a 60c gross feed-in tariff.

Hon Kate Doust: No, we criticised you for flip-flopping and changing your policy.

Hon PETER COLLIER: I am not going to take any more interjections. I sat quietly while the member was speaking.

Hon Kate Doust: Because you can't deal with the truth.

Hon PETER COLLIER: I am not rewriting history. I am telling members exactly what the Labor Party documents state. We decided that we would have a system that was more modest, more financially sustainable and that could be provided to a lot more Western Australians. We introduced a 40c net feed-in tariff that was phenomenally successful and very generous. This is where we are open to a bit of criticism, particularly when it is paid by consolidated revenue, because it is very, very expensive. I understand where Hon Robin Chapple is coming from. The state cannot keep on writing out cheques to put solar PVs on roofs. Some very prominent gentlemen in the energy industry call it middle-class welfare. They say that we are paying for the middle class to put solar PVs on their roofs.

Hon Kate Doust: Do you agree with that?

Hon PETER COLLIER: No, I do not agree with it at all. That is an argument that has been articulated. As a result of that, we introduced the 40c net feed-in tariff. It was phenomenally successful. We had in excess of 50 000 systems. It blew out from around \$28 million to almost \$120 million and the projections were even more excessive. Do we keep writing out cheques for a small cohort of the community—I do not have a problem with the solar PVs; I will talk about that in a moment—or use that money in other areas in the renewable space? We chose the latter. We went down to a 20c net feed-in tariff at this year's budget. We also said that we would cap it at 150 megawatts. That is very, very generous. When we consider that New South Wales had a cap of 300 megawatts and its population is five times the size of ours or Victoria has a cap of 100 megawatts and its population is three times the size of ours, I think for Western Australia to put on a cap of 150 megawatts was pretty generous. We put that cap on. As a result of that, we had a phenomenal uptake in the next few months.

I want to make one thing quite clear. The uptake of the solar PVs and the capacity of the solar PVs was regularly updated on the Office of Energy's website. The solar industry knew that we were getting precariously close to reaching that cap. It knew that within the next couple of months we were going to reach that cap. We did reach the cap. As far as the decision making was concerned, *The West Australian* ran a story, which was largely prompted by the solar industry because it knew we were getting to that point. Would it have been any different if we had given the solar industry another two weeks?

Hon Kate Doust interjected.

Hon PETER COLLIER: The member should let me finish. It still would have been upset. I can understand that. It is its industry. I will talk about that in a moment. I sympathise with the industry. To suggest that the decision just came out of the blue is nonsense. It knew that we were getting precariously close to that 150-megawatt cap.

Hon Kate Doust: How did they know that?

Hon PETER COLLIER: I am not taking the member's interjections. I was quiet when she spoke.

The PRESIDENT: Order! As one of those middle class with a solar energy system on my roof, I am very interested in this debate. I want to hear from all the members who want to contribute, one at a time.

Hon PETER COLLIER: I will not take the interjections because I have a lot to get through. I sat in silence for the entirety of Hon Kate Doust's presentation. She will get a chance to speak when she responds.

We knew that if we waited two or three weeks, there would be this mad rush on the solar industry. We were very, very conscious of that. We have met our obligation. The end result is that 70 000 homes in Western Australia have solar PVs on their roofs and we have in excess of 150 megawatts of capacity as a direct result of our feed-in tariff. That is a success in anyone's language. If we compare that with New South Wales with 300 megawatts and the number of homes that it has in comparison with the population of Western Australia, it is a great success story. We should compare that with the Labor Party policy, which, on the former Premier's own predictions, was going to produce 10 000 homes by 2012 and between two and 12 megawatts. What would we prefer to have—two to 12 megawatts or 150 megawatts? I would take the latter. Would we prefer 10 000 homes or 70 000 homes? I would take the latter. What is the latter—the Liberal–National policy. I am saying that we have been very successful in embracing the solar industry and ensuring that we raise the status of the solar industry throughout the community. It will be a sustainable industry.

Hon Kate Doust: How will that be sustainable?

Hon PETER COLLIER: I am not taking the member's interjections. I am just going to talk over her. I am sorry to be rude but I have told her time and again.

Hon Ljiljana Ravlich: Only because you don't know the answers.

Hon PETER COLLIER: Not at all.

The PRESIDENT: Order! Interjections are unruly, unparliamentary and unnecessary.

Hon PETER COLLIER: So there!

Several members interjected.

Hon PETER COLLIER: I could not help it. I apologise.

Our achievements stand the test of scrutiny. As I have said, the solar industry is understandably disappointed because the number of people who sign up for solar PVs will inevitably decline. We have now raised the status and profile of the solar industry like it could never have imagined. We now have an industry that is robust, vibrant and dynamic. I say to the solar industry that it should get out there and sell its product, the same as any new industry.

The feed-in tariff was never intended to be infinitum. It has raised the status and profile of the industry. Had we gone down the other path, not only would just 10 000 homes have solar panels but also the cost of a 60c gross feed-in tariff would have cost around \$1.6 billion. That is \$1.6 billion for the Labor Party policy. We need to understand that we just cannot do it. Members can promise the earth in opposition but sometimes they need to be responsible. In this instance, \$1.6 billion in anyone's language is just unsustainable.

As far as the feed-in tariff is concerned, I encourage people to put solar panels on their roofs. To conclude on this matter, what needs to be remembered is that the feed-in tariffs do not make people rich. They may pay off their solar panels a little earlier. With all due respect, what happens with the solar panels is that people will reduce their electricity bills by about a third and they will still pay off those solar panels within 10 years. I say to members of the community at large, who really have embraced a more sustainable energy future—I have seen that through the strategic energy initiative, which I will talk about in a moment—that without a shadow of a doubt I would highly recommend they consider putting solar panels on their roofs because it will significantly reduce their electricity bills, they will pay off their solar panels with 10 years and they will be doing an enormous amount of good for the environment. From my perspective as energy minister, I think it has been a very, very good project. I am proud of the fact that 70 000 homes now have solar panels on their roofs and we have 150 megawatts of capacity.

With regard to the renewable energy buyback scheme rate, just to conclude, yes, that has been an area of contention. I might say, as I have said on media constantly, that the REBS rate is 7c a kilowatt hour. That falls within the range that applies across all jurisdictions. All jurisdictions have a rate of 6c to 8c a kilowatt hour. But, as I have said over and over again, that is constantly under review, and we will continue to look at it. And, yes, the current system is in suspension, and I will have more to say about it in the future.

Hon Kate Doust interjected.

Hon PETER COLLIER: Can I just move beyond the feed-in tariff, because, as I said, that is definitely a success story as far as this government is concerned.

With regard to the actual motion, this is where I take—I do not take offence, but certainly the actual motion does not reflect the reality of this situation. The motion states that we are taking a half-hearted approach to encouraging and supporting the development and uptake of renewable energy sources. That is simply not the case. I think, again, that our record stands alone in that area. There is one figure that I will repeat over and over again over the next 25 minutes, and that is the fact that since we have been in government, the renewable energy component within the south west interconnected system has increased by 85 per cent, from less than five per cent to around nine per cent. So we as a Liberal–National government can hold our heads high and say this is what we have achieved. We have certainly stimulated the industry over the last three years like never before. We have engaged with the industry, and we will continue to engage with the industry, and we will continue to provide a broad cross-section of members of the renewable energy industry with stimulus, with advice and with encouragement.

For example, I will just go through a few of our achievements to show just how multifaceted we are. As I have said, we cannot be at the point as a government where we sit back and just have wind farms across the length and breadth of the state. I have no problems with that. But we cannot rely just on wind farms. We need to have a much more diverse portfolio. Having said that, I will tell members what we have done over the last three years.

As far as Verve Energy is concerned, in terms of its renewable energy portfolio, we have Grasmere wind farm, to a total cost of \$40 million. We have added 67 additional wind turbines to expand the capacity by 13.8 megawatts to 35.4 megawatts. When completed, this project will provide enough energy to supply around 10 000 homes, raising the renewable energy notionally available to Albany to 80 per cent. The turbines are

expected to be operational by December 2011. If members have not seen that or been down to Albany, I highly recommend it. Again, that shows our commitment.

We also have the Mid West energy solar project, which I announced at the energy conference about 12 months ago. The Greenough River solar farm, which is to be built around 50 kilometres south-east of Geraldton, will be the biggest utility-size solar farm in Australia, with 10 megawatts of capacity. The total cost of the project is expected to be approximately \$50 million, including a \$10 million contribution from royalties for regions, and an additional \$10 million from the state government. Development of this project is progressing well, with the facility due to be opened by the second quarter of 2012. Again, that shows that we are diversifying our portfolio. People can say we need more et cetera, and we do need more, and we will get there. But, as I am saying, to suggest that we have our heads in the sand with regard to this area of the energy sector is ignorant in the extreme.

As far as the Carnegie Wave Energy plant, yes, I have had a lot to do with Carnegie, and I am proud of the \$12.5 million that we gave to Carnegie for the wave energy project. As I said, this project involves the construction and deployment of a grid-connected commercial scale—that is, up to five megawatts—wave energy demonstration power plant at Garden Island. The facility will consist of multiple submerged CETO units, subsea pipelines to shore, hydraulic conditioning equipment, and onshore generation. Carnegie has successfully deployed a CETO wave power generation unit off Garden Island which is providing test data on the unit's performance. Again, it is a way forward. That is in its infancy, that industry, in Western Australia in particular, but we have shown our commitment by contributing over \$12.5 million for that project.

The government has given Green Rock Energy \$5.4 million towards its project for the commercial demonstration of direct use of geothermal energy in hot sedimentary aquifers beneath the Perth metropolitan area. This is intended to replace electricity for building air conditioning at the University of Western Australia's Crawley campus.

We will continue to inject money into pilot projects in their infancy to ensure that we can extend our portfolio.

Aurora Biofuels has been awarded \$2 million for its project to use carbon dioxide from major industrial facilities in the north west for use as a feedstock for an algal production facility in Karratha. Algae harvested will be used to produce biodiesel and a range of other projects, including stockfeed and nutrient products.

The City of Kalgoorlie–Boulder has been awarded \$559 million for a project to install ground source heat pumps, paired with photovoltaic panels, to provide renewable energy for pool heating at the Kalgoorlie–Boulder Oasis Recreation Centre.

In addition to that, we have just announced \$8 million in funding for round 4 of the low emissions energy development fund. That was announced in May 2011. Applications have now closed and are currently being assessed.

Certainly as far as having a multitude of projects on the drawing board, the Liberal–National government can hold its head up high, because we have taken a multifaceted approach. As the Auditor General articulated in 2007, a number of these new energy sources are in their infancy, and we have taken the baton so that we can ensure that we get to a situation whereby we have —

Hon Kate Doust interjected.

The DEPUTY PRESIDENT (Hon Michael Mischin): Order, members! Hon Kate Doust had the opportunity to deliver her speech without interruption, and the minister should be extended the same courtesy. I understand that Hon Robin Chapple plans to speak shortly, and he will have the opportunity to say his piece at that time.

Hon PETER COLLIER: Thank you, Mr Deputy President.

As I have said, that multifaceted approach is what is needed—that we do not just keep injecting money into one particular source, but we look at a variety of sources.

One of the biggest things that we have achieved as a government is the Collgar wind farm. The government approved Synergy entering a 15-year power purchase agreement of about \$1.5 billion for the development of the Collgar wind farm. That 260-megawatt wind farm in Merredin, in the Wheatbelt, is scheduled to have 111 turbines. I went up there with Brendon Grylls a couple of months ago now. It was fantastic to prompt the first energy production from that wind farm. It was terrific. It was really good. There is a tremendous amount of enthusiasm and optimism within the sector. If any members have nothing better to do, or they are genuinely interested in renewable energy, I would highly recommend that they go to Merredin and have a look at that wind farm. It is absolutely spectacular to see it, particularly from the air. At last count, the number of turbines was around the 100 mark, so I imagine it will get to 111 very shortly.

The power stations at Marble Bar and Nullagine combine renewable and traditional sources of generation—that is, solar photovoltaic and diesel—to help generate power for people in the northern remote areas of the state. The

solar PV tracking arrays have a total generating capacity of 500 kilowatts, each operating in conjunction with diesel power stations. Apart from being a world first, this combination of technology ensures a very high level of solar energy penetration and a reliable source of power for those communities.

Hon Ken Baston interjected.

Hon PETER COLLIER: Thank you, Hon Ken Baston. I think Hon Ken Baston went to the opening, did he not?

Hon Ken Baston: Yes.

Hon PETER COLLIER: Cheers.

When we came into government, we provided another \$6.5 million for the solar schools project. That is a really, really good project. We also extended that program beyond public schools to include private schools and Catholic schools. That project provides schools with the opportunity to generate some of their own power. It stimulates the interest of the young members of our community—those in our schools—in solar energy. I have been to a couple of the openings of that program in schools. That program has stimulated interest from students in our schools in not just the solar industry, but a more sustainable energy future.

We have provided \$6 million to continue the solar hot water heater subsidy scheme. Rebates are provided to householders who install environmentally friendly, gas-boosted solar water heaters, with the scheme extended until 30 June 2013.

Hon Ljiljanna Ravlich: Why don't you stick to the motion!

Hon PETER COLLIER: This is exactly the motion. Hon Ljiljanna Ravlich should try to keep up. What we need to do —

Hon Ljiljanna Ravlich interjected.

The DEPUTY PRESIDENT: Order! I do not think I made myself heard. Hon Kate Doust had the opportunity to speak without interruption; the minister is entitled to the same courtesy. If Hon Ljiljanna Ravlich wishes to say something on the motion, she will have her chance.

Hon PETER COLLIER: Thank you, Mr Deputy President.

For members of the community who are interested, there is a renewable energy handbook put out by the Office of Energy, which is very, very comprehensive and provides every possible answer to any question for those people interested in the renewable energy sector. People come into my office virtually on a daily basis to talk about energy projects and one thing or another. They really find this manual very worthwhile indeed. From that perspective, where we have gone with all the projects has been very successful. To suggest we have taken a half-baked approach does not reflect the reality of the situation. We have stimulated the market in a number of areas. As I keep saying, I have nothing against wind power. The fact that we have, as a result of Collgar, another 206 megawatt wind farm in Western Australia is testament to that. That in itself will not cut the mustard in meeting our renewable energy target. We must have a multifaceted approach. That is why we have started the process—through the wave energy project, through geothermal, through solar and through the very successful feed-in tariff. That, again, will not cut the mustard. We have to look at a broader notion about where we are going as a state in terms of energy sources, energy generation and network capacity. The network has to be considered with regard to renewable energy. We have one of the largest above-ground networks in the world, which is very disparate in size and which creates problems for renewable resources, particularly in edge-of-grid areas. I am very conscious of that.

Just on two years ago I initiated the strategic energy initiative. The strategic energy initiative was a wonderful thing. As a result of the strategic energy initiative we have said that we do not want a reactionary approach to energy. We want to stimulate and initiate with regard to energy. We do not want a patchwork approach to energy. We actually listened to the sector and to the community, and developed a vibrant, dynamic policy framework that looked to meet the energy needs of and potential load for Western Australia, not just for the next two or three years, but in fact the next 20 years. That is what Energy2031 is all about. It will ensure that we have a safe and secure energy future for all Western Australians, cognisant of the fact that, even though we are an isolated grid and we have an isolated network, we are part of the international community. That brings with it special challenges. There is a desire to have a much more sustainable energy future, and Western Australia wants to be a part of it.

With the strategic energy initiative, I went to as many of the public forums as I could to access the views of all Western Australians and to say to members of the Western Australian community, “We want you to be part of it.” In addition to that, we had a number of consultation groupings with industry across the board, not just with the energy sector but with industry per se. That was to say to industry, “What do you need; what are your needs;

and where do you think the shortages will be?” It is especially important in Western Australia. A significant proportion of our energy needs are very much reliant upon a single gas pipeline from the north west of the state. That was never before more evident than as a result of the Varanus Island explosion. We have to look at a broad-based comprehensive energy policy.

As a result of those consultations, having accessed the views of the community, industry and government, we compiled a discussion paper. I mentioned at the energy conference this morning that a number of things came out of that. Affordability is always going to be there; we are very conscious of that. The things that came out were the network and a much smarter energy future; another thing that came out related to a more sustainable energy future. They came through loud and clear. It was not just with individuals. It was really heartening to go out and listen to people who are very passionate about energy. There are a number of community members who are very passionate about our energy future. I did not just listen to them; I read what they had to say. There were some very informed submissions in response to the discussion paper. That discussion paper, as I said, certainly was just a framework for where we are going, and then we asked for submissions to the framework to say, “What would you like to add to it?”

A key component of the strategic energy initiative is the cleaner energy future. The cleaner energy future is a dedicated subset of the strategic energy initiative. That will look at a raft of areas including a broad-based idea about where we go with the renewable energy component of the Western Australian energy market. To suggest there is no framework is naive and ill-founded. This will be the first time since 1979 that we have had a broad-based energy policy in Western Australia. Everybody will have the opportunity to contribute. I highly recommend that the opposition contribute. I know the Greens (WA) have contributed. It provides all Western Australians with the opportunity to contribute to a more sustainable energy future. Hon Kate Doust was quite correct—I did say it, and I will say it again now: it is not the gospel according to Pete, it is not the gospel according to the government; it is the gospel according to the energy sector across the board. A cleaner energy future is very much a key component of that completed document. I make no apology for holding back its release; I do not want that document released until it truly reflects exactly what we need for the long-term future of Western Australia. It would be very nice to have a dust collector and to have put out a nice glossy brochure two months ago that basically still needed work. I could have done that for a short-term gain, but we would have achieved nothing. It is very important to me, as energy minister, to ensure that we look at the energy future of Western Australia in a mature, comprehensive fashion. That is what we have done.

The strategic energy initiative has been very well received. I have not heard any criticism of the actual process. I have heard no criticism of the intent of the document. I have no doubt that once the final document is released there will be some criticism; that is inevitable. Whenever there is a visionary document, not everybody will be satisfied. This is particularly so in the energy sector, which is a very, very high stakes sector and in which there are extreme and very disparate views in a number of areas. I have no doubt some members of our community and some industry groups will not be satisfied with a particular component of the strategic energy initiative. Having said that, everyone will have the opportunity to contribute. It is not some sort of clandestine attempt to put a dogma on energy policy from the Western Australian government’s perspective; the intent is to embrace the ideas of the community at large and ensure we get a document that is right. As I have said, a key component of that document will be the cleaner energy future. The cleaner energy future will be a dedicated component of the strategic energy initiative. It will be a blueprint for where we are going across Western Australia in terms of a more sustainable energy future. It will have at its hub the recommendations that have come through the consultation period over the past two years.

One of the areas that came up in the strategic energy initiative discussion paper was energy efficiency. It does not surprise me at all; I am very pleased that it came up. Energy efficiency came through loud and clear. In all of the consultations that I went to throughout the state, people want to look at more energy efficiency. Certainly over recent years electricity consumption has burgeoned. As a government and as a community we need to educate the community at large in matters that are effective to reduce electricity use and have a more sustainable and efficient energy future. That comes through a number of ways. That will also be a key component of the cleaner energy initiative. Another way of course was to ensure that we assist the community in coming to terms with the fact that we need to reduce electricity use. There have been significant increases in electricity over recent years; I acknowledge that. Reducing electricity use will assist householders and consumers with their electricity accounts, but also will assist the community in acknowledging the fact that they are a part of a more sustainable energy future not just in Western Australia but globally. Energy efficiency is very important to me. I was cognisant of the fact that about 18 months ago there was not a cohesive or comprehensive policy for developing more energy efficiency. I spoke to Western Power and Synergy and asked if we could have a more coordinated approach to energy efficiency, certainly in terms of marketing. That is how the Switch the Future campaign came about, through Western Power and Synergy—members will have seen the little chuditch in the spinning wheel. As a result of that the community has been engaged. It is not just a campaign for novelty value;

it does exactly the same thing as the Waterwise campaign did about 15 years ago when we had to assist the community in coming to terms with the fact that there was not going to be plentiful supplies of water forever and that people could not just turn their taps on day in, day out. We got to the point at which we said that we need to reduce our water consumption by watering our gardens only two days a week. When that first happened the community at large was outraged; the geraniums were going to die and the lawn was going to die et cetera. Of course now there is a general acceptance throughout the community that we need to be much more waterwise, and that largely came about through the stimulus, promotion and encouragement of the Waterwise campaign all those years ago. Nowadays, of course, the Western Australian community is right on board with water conservation. In fact, it has no problem with watering two days a week and with reduced water usage during the winter.

It is exactly the same with electricity. Because we had relatively cheap electricity until the last couple of years, there has been a notion throughout the community that it does not really matter. There has not been any motivation or desire on the part of the community to reduce its electricity use, so as a direct result of that we have seen skyrocketing use of electricity, particularly over the past 10 years. The energy efficiency media campaign has been very well received throughout the community. As I said, it has a degree of novelty value, but at the same time it has a very clear message. The message is starting to be embedded throughout the community that we do perhaps need to think more wisely about our electricity use and that we need to reduce our electricity use to reduce the size of our bills and for a much more sustainable energy future.

Having said all that, I will get back to the intent of the motion. I do not have a problem having a discussion about renewable energy. I stood here today and articulated where we have gone as a government and where we started from, which was really looking down the barrel. We are proud signatories to the national renewable energy target, and we have taken a multifaceted approach to our renewable energy projects. We have extended the projects beyond wind, although wind is still a key component of our renewable energy. We have extended it to solar, geothermal and wave energy, and we will continue to extend our portfolio to make sure that we access as many renewable energy projects as we possibly can. Having said that, we have also stimulated the imagination of the community through the feed-in tariff, whereby 70 000 homes now have solar photovoltaic panels on their roofs. At the same time, for the first time since 1979, we have taken the initiative to show some vision with our energy policy. The strategic energy initiative is the first time in 40 years that a government has actually taken the initiative and said, "We're going to actually think about the future energy needs of Western Australia, not just in the short term, and not just as catch-up; we're going to think about the energy needs for the long-term needs of this state". We want to never again have the situation we had in 2004, when we ran out of electricity; we never want to be in that position again. We want to acknowledge the fact that, with a growing population and with the increased needs of industry, we need to be more proactive and visionary, and that is exactly what we are doing.

Yes, we have hit the ground running. We are a dedicated, isolated boutique community here, from an energy perspective, but as far as this government is concerned, we can hold our heads high and say we have been very proactive and we are looking at a multifaceted approach to renewable energy projects throughout Western Australia. We will continue to work hand-in-hand with industry and the community to ensure that that process continues.

HON ROBIN CHAPPLE (Mining and Pastoral) [3.24 pm]: I commend the motion by Hon Kate Doust, but I really want to focus on the last part of the motion about the government taking immediate steps to put Western Australia on the cutting edge of the use of wind, solar, geothermal and tidal energy. I suppose this really comes back to the issue that this is not about appeasement or mitigation; it is actually about philosophy and policy. The most critical issue facing us at this time is the need for rapid, drastic reductions in greenhouse gas emissions. This is a matter of state, national and international urgency. The science is clear: we need to understand that energy forms a significant part of the methods we have to deal with these issues.

While showing some support for renewable energy, the "Energy2031 Strategic Energy Initiative Directions Paper" in fact did not adequately address these issues. What is needed is renewable energy targets of 60 per cent by 2020, and 90 per cent to 100 per cent by 2030. These are both possible and essential, and are in line with what climate science demands, and what renewable energy scientists and engineers have determined is possible.

Construction or expansion of coal-fired power generation facilities must be stopped, in the public interest. Existing coal facilities must be rapidly phased out. Carbon capture and storage from coal or natural gas-fired power generation facilities is unlikely to provide adequate reductions over the next 20 years. It is within the next 20 years that we need to take those crucial steps. Although carbon capture does not appear to have the potentials that we are looking for, it has also been shown that it is not viable on any significant scale, technically or environmentally.

The very slow political process of establishing targets that we have seen to date cannot work in an environment in which increasing knowledge of amplifying feedbacks in the climate system keeps the necessary targets

advancing. When it comes to renewable energy, if we are actually going to deal with climate change and the impacts of climate change, we have to understand that our move towards renewable energy has to be exponential growth; not fits and starts and not program by program. It has to be a philosophy of the energy industry and the energy sector of governments; and not just here, but around the world. A number of countries around the world are, indeed, taking radical steps towards zero carbon emissions.

Tim Flannery is an Australian palaeontologist, mammalogist and author. He was the 2007 Australian of the Year, and chair of the Copenhagen Climate Council. According to my notes, he stated —

There is one problem that is now so urgent that, unless it is resolved in the next two decades, it will destroy our global civilisation: the climate crisis.

Stationary energy is one of the key factors that needs to be addressed. We cannot look at energy as just being something else that we will need to deal with. It is principal in dealing with these issues.

Hans-Josef Fell is a member of the German Parliament, who, along with Hermann Scheer, framed the national renewable energy legislation that led to Germany being a world leader in renewable energy development. According to my notes, Hans-Josef Fell said —

There is only one solution that meets both climate protection and energy security objectives: the switch to renewable energies—completely, worldwide and within the shortest timeframe possible.

The world is heading towards a 100 per cent renewable energy future. The question is whether we approach it voluntarily or by force of nature. Will the endless growth mantra of industry and governments dictate the burning of every last gram of the world's stored carbon—coal, oil, natural gas, tar sands, oil shale and methane hydrates—while forcing the earth into an ever-increasingly uninhabitable state, or will some sense prevail? It is possible that our leaders will finally accept that no amount of wishful thinking, investment or research can change the laws of nature. The earth is finite; there is nowhere else to go.

The state government's strategic energy initiative directions paper Energy2031 failed to adequately address the most crucial energy issue of all—climate change. We know from research that is being developed in Western Australia, using corporate and Environmental Protection Authority report data, that emissions in Western Australia are out of control. Federal government data shows that Western Australia's emissions were 69.8 million tonnes per annum in 2009. Research to date establishes that we are producing 53.7 million tonnes per annum from industry alone. This research does not include many stationary power generation figures, road or air transport, or, indeed, land clearing. One of the frightening factors to come out of that investigation is that 15 million tonnes of CO₂ per annum comes from wildfires and prescribed burning. That is a significant amount of Western Australia's emissions. New projects, and a few that are in care and maintenance, account for a proposed increase of a further 76.7 million tonnes of CO₂ equivalent per annum. This means that we will triple our 1990 figures. We are supposed to be working towards exceeding that amount by only eight per cent. The research that has been done to date, which is nearly concluded—we are waiting for a number of organisations to respond to requests—indicates that there is no requirement for industries that produce less than 250 000 tonnes of CO₂ per annum to report their emissions. The emissions we know of, from the federal government's data and from our own studies, do not include significant proportions of the industry or other sectors. A company that produces less than 250 000 tonnes of CO₂ per annum does not have to report its emissions. On those figures alone, Western Australia is well above the projected figure of emitting 150 million tonnes of CO₂ per annum.

Western Australia's renewable energy resources equate to many times our energy demand, but the present utilisation is very low. I take my hat off to the minister for some significant developments that have occurred with his support. However, we need long-term policy, not handouts here, there and everywhere. We do not need the government to cherry pick. The utilisation of our renewable energy sources is very low, despite the availability of existing technologies and others that are on the verge of commercialisation. Not only is renewable energy essential to solving the climate crisis, but also it can provide a range of additional benefits, such as the rejuvenation of rural economies, including local employment, and a source of income for farmers who suffer losses due to climate change. Some of the key benefits of renewable energy are that it is important on the edge of the grid and for stand-alone applications in remote areas, including in Indigenous and mining communities where diesel is used almost exclusively. This is a huge cost to remote communities, which sometimes pay three or four times the value of what we pay in the metropolitan area. Establishing and distributing Pratt and Whitney-style gas peaking power plants not only as a security measure, but also as an operational part of energy balancing, as Germany does, can drive a greater utilisation from existing networks. Some simple changes can be implemented at low cost immediately, including solar passive building design, retrofitting existing buildings, installing solar hot water systems and planting trees for shade. The increased use of rooftop water catchments using rainwater tanks can significantly reduce the energy associated with pumping centralised water sources. Desalinated water can be obtained directly from renewable sources without the need for additional electricity, by

using wave energy, similar to one of the Minister for Energy's favourite projects, the Carnegie Wave Energy project that uses CETO technology wave energy. Geothermal energy can be used to provide heat for distillation and can be used as direct energy without first generating electricity. It can be used to heat pools, provide comfort and process heating in houses, geothermal air conditioning and cogeneration. This type of energy does not need to generate electricity; it is provided instead of electricity. Solar thermal energy can be stored as heat and therefore can be used to match grid loads.

This morning I attended the energy conference at which statements were made that renewable energy can never deal with baseload. Elsewhere in the world it is being used by many methods to provide baseload power. Solar thermal energy uses power to create a bank of energy either through water or sodium generation and the like. Solar voltaic systems can be installed on existing rooftops, close to the energy user. No additional land is required for this and transmission losses are negligible. I mentioned the other day that solar panels cost about \$1.47 per watt. Manufacturers are aiming to reduce that cost to about \$1.11 per unit and they are projected to cost \$1 or less by next year. Renewable energy is starting to become comparable with baseload systems. Wind energy becomes more reliable as geographically dispersed wind farms are added to the grid. Some countries have long transmission lines so that when the wind blows in one area but not another, the power can be distributed through the grid. Wave energy can provide baseload power and can also respond to rapidly changing demands. It can be switched on and off quite easily. Biomass energy can be produced while simultaneously sequestering carbon and remediating salinity. Waste can be converted into energy using biogas technology, which can provide the additional benefit of reducing landfill and methane emissions, and remediating land by producing compost. They are all the positive spin-offs that can be used by developing a renewable energy future.

Sustainable Energy Now Inc is the leading non-government organisation in Western Australia that deals with renewable energy. It pointed out in its submission to the Energy2031 strategic energy initiative that grid upgrades are required to support the high penetration of renewables. That is the point the minister has also made. These may include increases in transmission capacity to allow bidirectional flow, load shedding and adding, storage and demand-side management, and better external reticulation. Although these additions may be costly, they will also lead to increased energy reliability and security, in line with one of the strategic goals of the Energy2031 directions paper. If an energy supply or region goes down, such an upgraded grid would be able to respond rapidly. The SEN submission also details appropriate changes to the regulatory framework to promote uptake of renewables.

SEN has also produced a discussion paper entitled "Renewable Energy Scenarios for Western Australia" in which it explains renewable energy technologies, and many of the abovementioned points are reiterated. SEN presents two target scenarios showing possible energy renewable energy mixes for the south west interconnected system of 30 per cent by 2030, and by 80 to 100 per cent by 2050, based on an energy growth rate of 3.7 per cent per annum. Although these time frames offer plenty of time to make a smooth transition, unfortunately even those targets have a very low likelihood of addressing climate crisis in time.

The SEN work shows that penetration into the SWIS of up to 100 per cent renewable energy is technically feasible. There is no fundamental reason why the suggested 2050 target of 80 to 100 per cent could not be brought forward to 2030, as advancing understanding of climate feedback now suggests is necessary. This would involve an accelerated time frame for deployment of some of the newer technologies such as wave and geothermal, but it is achievable. There is also no reason why the north west integrated system and the Esperance grid—indeed the whole state—could not achieve similar targets. Heading north to Geraldton, some renewable energy sources become less available, but others become more available. The further north we go, solar thermal, geothermal and tidal become much more available, and indeed much more economic.

A new book from the International Energy Agency states —

Variability and uncertainty are not new challenges; power systems have long taken them into account. Fluctuating demand—from hour to hour, day to day, season to season—has been a fundamental characteristic of all power systems since the first consumer was connected to the first power plant. All power systems include a range of flexible resources to manage this fluctuation: dispatchable power plants for the most part, but some systems may also incorporate electricity storage, demand-side management, and/or interconnections to neighbouring power markets.

I take on board that we are an isolated grid, and indeed our ability to load share with other parts of Australia is very limited, but certainly Beyond Zero Emissions was proposing that we should look at a trans-Nullarbor connection direct-current system.

The IEA continued —

The question is: can the use of these resources be enhanced efficiently to balance increasing variability resulting from VRE deployment?

The IEA, in detailing the results of its grid integration of variable renewables—GIVAR—project, assessed eight regions around the globe for their ability to balance renewable energy sources to provide reliable power. The assessment demonstrated the great extent to which renewables can immediately be incorporated into existing power networks and factors contributing to the difficulties of further uptake, including weak interconnections among Japan's 10 power utilities, which makes it hard to balance supplies from one region to the other. That is a classic example of what happens when there is not a proper grid system. Japan's nodal system has meant that it is one of the least likely to be able to take up renewable energy developments. That is bad news, especially in light of post-Fukushima concerns about nuclear energy. Japan proves to be the least flexible, with the potential to accommodate a variable renewable energy base of only 19 per cent. Prime Minister Naoto Kan, who now advocates that Japan wean itself off its reliance on nuclear power, is urging Parliament to pass a law promoting renewable energy sources such as solar power before he retires.

Denmark, in contrast, could accommodate up to 63 per cent of variable renewables in its energy links. Its greater capacity is due in part to its energy grid's strong connection. That linkage makes it possible to share renewable resources across a large area, even if the wind is not blowing or the sun is not shining in one part or another. Other regions' capacities are 48 per cent for the Nordic power market—namely, Denmark, Finland, Sweden; 45 per cent for the western interconnection of the United States; 37 per cent for the region in eastern Canada operated by the New Brunswick system; 31 per cent for the British Isles—Great Britain and Ireland; 29 per cent for Mexico; and 27 per cent for the Iberian Peninsula. These capacities reflect only what each region could accommodate given its current energy infrastructure. Those countries already have infrastructure. The IEA states that these estimates do not in any way represent the technical ceiling for the deployment of potential.

Australian debate, and more specifically that of Western Australia, is strangely at odds with global reality. To quote *The Sydney Morning Herald* of 25 May 2011 —

Curiouser and curiouser, an observer might remark of what passes locally for climate policy debate. The past week's events add to the impression of another world where "we're all mad", as the Cat tells Alice in Wonderland. Globally, with the stark exception of the US, few seriously doubt that climate change demands an urgent response. Australia is still having that debate. While party leaders claim to accept the science, senior colleagues scoff and mutter about leftist greens.

Britain's Conservative-led government exposed such views as ridiculous a week ago when it announced binding targets to halve greenhouse gas emissions by 2025, using 1990 emissions as the baseline. The UK has had emissions trading for a decade. The government's Labour predecessors cut emissions by more than 20 per cent, evidence of a bipartisan approach. In Australia, Julia Gillard's government is still having to debate the science while emissions rise almost unchecked.

In WA, we have no emissions debate, no discussions and no arguments, and our state's emissions are on target to triple in the same length of time that Britain hopes to halve its emissions. *The Sydney Morning Herald* article continues —

On Monday, the Climate Commission's report warned the world was warming "beyond reasonable doubt" and urgent action was needed in this "critical" decade.

In this state we do not even know our carbon emissions. We have repeatedly asked different agencies during estimates hearings what our emissions are, but nobody seems to know. Nobody seems to know who is making any attempt to record them, let alone do anything about them. At least at a federal level we are locked into an argument about climate change mitigation and methodology. What a joke! The science is out there; it is unequivocal. Only in Australia do we have doubters, and only in Western Australia do we fail to remove our heads from a blind economic pursuit to even consider the matter. While the Australian focus is on the cost of abatement and compensation, Britain aims to tap into the huge growth market of renewable, clean energy technology. This statement was made by the UK climate change minister, Greg Barker. Germany has already done that. He stated, "That way lies economic prosperity and long-term growth." Germany, which has never been soft-headed about these economic matters, enjoys multibillion-dollar benefits from being a world leader in renewable energy. The German government—another conservative coalition government—considers that 100 per cent renewable electricity is possible by 2050 and has set its target at 80 per cent in that time. It just shows where Australia and Western Australia are in terms of the global directions; we are not players, we are pariahs. Back in Australia the focus is on the short term. Facts and evidence count for less than fear and self-interest. Policy consistency does not matter.

On that note we move to the latest lack of commitment by this state government—the end of the feed-in tariff. I take the point that the minister was making earlier on, and I actually understand some of his problems because the minister was faced with a system that would never ever work because he was going to rely on Treasury to fund the process. My office has received many calls from solar industry operators very concerned about the prospects of their businesses. I will cite one recent phone call in which the operator advised that after July the

number of new customers they have taken has dropped from 80 to 90 per cent, and since the announcement last week it has dropped even further. They have not laid off staff yet, but if sales do not pick up they will not be able to maintain their current staffing levels. We have also been told by companies that they are proceeding to cut two-thirds of their staff. One company with a large installation team laid off 20 of its 30 electricians. Whilst we might have put solar panels on roofs, the impact on the industry of this policy has been a deathblow. If we had had a decent gross feed-in tariff out in the general marketplace and not a subsidised process, we would still be seeing the industry growing in leaps and bounds. It is great that we have 70 000 solar panels installed on our roofs. Some of the things that we are doing are tremendous, but they are all short term; they are not about philosophy or policy for the future. The solar photovoltaic industry is coming to a standstill in WA with a potential to crush the growing industry—an industry that was grown on the basis of innovative processes by this government. I feel really mortified for these guys. They are moving forward with passion to develop their industries in this state, and now it seems they are going to go the way of the dodo.

The minister has publicly been saying that households can still achieve payback within a 10-year period and that industry can still cling on, but it is only the highest energy users that can reach the goal, and only if they continue to use high volumes of energy. The decision to cut the feed-in tariff has perverse outcomes. Without a feed-in tariff, solar companies are turning clients away. A potential customer called one company yesterday. He was a high energy user, as he pumped from a bore to irrigate. This was somebody who was using solar energy in his irrigation system. He is not going to use solar to irrigate in the middle of the day, so if he were to install a solar system he would be exporting power for 7c a kilowatt to the grid and then paying 21c at night. With pricing like this, the solar industry is left without a market. The only way that solar makes economic sense with a seven-cent price is if people can switch their energy use to the sunniest times of the day, rather than at night. This, of course, has some perverse outcomes—encouraging people to move night-time electricity use into the already-stretched peak afternoon and mid-evening period. The feed-in tariff, prior to its ultimate demise, assisted residential customers with solar PV and micro wind systems. What was always needed was a target and feed-in tariff for all renewable energies. Unfortunately, that is where the whole feed-in tariff system got very confused; it focussed just on mums and dads, and roofs. We want to see the growth in large-scale solar thermal energy, in wind farms, in mallee oil bio-energy and geothermal exploration. That is where some of the impetus should have gone with the feed-in tariff. It would have helped those emerging industries come to grips with some of the potentials and the public potential for providing power into the system from some of the larger, more baseload systems. The renewable energy industry in Western Australia could have been a pathway to sustainable prosperity in WA. It would have been to our great credit to invest the proceeds of our mineral boom into this future economic foundation.

Much of the potential for renewable energy development is in the regions, alongside other industry and on the edges of the grid. I would love to see the first solar thermal plant in Australia built in Kalgoorlie. It has been a long-time wish of the Kalgoorlie-Boulder council and indeed the residents of that area. Unfortunately we saw the proposed solar tower moved to the eastern states. When it comes to solar thermal plants, why do we have to leave that up to the eastern states to develop? Why can we not build those systems here? Those systems can provide the very baseload power out of renewable energy that the minister often talks about.

The solar, wind and bio-energy options for the Mid West, Gascoyne and Wheatbelt are also very promising. Government policies that invest in renewables are promoting a long-term sustainable funding and employment base for the regions. Supporting the renewable energy industry provides more powerful support for regional communities.

It is interesting to note the minister saying that his position on 20 per cent renewable energy by 2020 is a government direction, because I am reminded of some questions I have asked the minister and his department previously about how they are going to incrementally increase by 2020. The notion was, “We will look at that at some stage in the future.” If we are fair dinkum about renewable energy and about resolving the problems of climate change, which is fundamentally the reason we are going for renewable energy, then we need to start putting in long-term programs now—definitive year-by-year budgeted outcomes. Unfortunately, this is not happening. We have done well to date, but we cannot just rest on our laurels. We need long-term strategic plans.

HON HELEN BULLOCK (Mining and Pastoral) [3.59 pm]: I thank Hon Robin Chapple for leaving me eight minutes in which to make a start on my speech. I think Hon Kate Doust has touched on this but for those who are not aware, Western Australia has very productive energy sources, as mentioned in this motion, such as wind, solar, geothermal and wave and tidal powers. I will give some examples of how productive these renewable energies are. First, I will use wind power as an example. There are 500 000 square kilometres in Western Australia’s south west that have an average wind speed above six metres per second at a height of 60 metres above sea level. Just 2 500 square kilometres of this area would, on average, produce energy equivalent to peak demand on the south west interconnected system. Another example is concentrated solar thermal. It is estimated that all electricity demand on the SWIS could be supplied by 200 square kilometres of concentrated thermal

connectors in sunny, clear sky areas. One more example is wave power. It is estimated that there is enough wave energy along Western Australia's coastline between Geraldton and Bremer Bay to produce more than five times the SWIS peak electricity demand.

Although we are sitting on these very productive energy sources, we are doing very little. I am sure the Minister for Energy does not like to hear this. We are not doing enough to develop renewable energies from these natural resources. It does not matter how the minister likes to dress up his achievements in renewable energy development. At the moment Western Australia's renewable energy counts for only two per cent of total usage of fuel to generate electricity. The obvious question to me is: why are we not doing more to develop energy from these renewable sources? I can come up with only one answer; that is, we are very comfortable to continue to rely on fossil fuels because we have plenty of them in reserve. We also have very well-established infrastructure that uses these fossil fuels. In the next 10, 20 or even 30 years the electricity generated by using fossil fuels will still be cheaper than the electricity generated by renewable energy sources. The reason is very simple. In order to have the necessary infrastructure to use these renewable sources, a huge one-off initial capital cost is required to build that capital infrastructure. That will probably cost the state billions of dollars. Correct me if I am wrong, but this is the fundamental reason why this government does not have a whole-hearted approach to switch to renewable energy sources.

In the past 200 years the world's population has grown sevenfold. In 1800, the world's population was just below one billion. Today we have 6.9 billion people in the world. The fundamental issue is actually a population issue. That is not the topic of the day. We have realised that this multiplying population will continue. All of us as human beings have basic needs and demands. For instance, we need to be fed by a little bit of fish, meat, grains, greens, vegetables and occasionally a little bit of luxury such as bananas. We started to realise the importance of the sustainability of primary industries such as farming, fisheries, agriculture, meat production and last, but not least, forestry. Nowadays, with a globalised economy, we can always buy what we need from the international market to subsidise the gap between what we consume and what we produce. Ideally, every country should have its own independent primary industries and be self-sufficient as well. Independent in this instance means being free from price fluctuation and free from shortages of supply on the international market. However, with primary industries such as farming, agriculture and meat production, we are not too worried about the independency and self-sufficiency because we know we could be both, if necessary, with a little investment. All these primary industries rely on nature's renewable resources such as land, sunshine and water, of which we have plenty.

The continued growth in population in the future will not only put pressure on the primary industries I have just mentioned, but will also put pressure on another primary industry; that is, the energy industry. Only two and a half centuries ago we as human beings learned to use electricity. Today we are totally dependent on it. It is not wrong to say that the energy industry is the mother of all industries. No-one can deny that the sustainable energy industry underpins our future economic growth. The question is: how sustainable or how secure is our energy industry? Is it self-sufficient or do we have to compete for energy resources on the international market in the future? How high will prices for energy resources go? What price can we afford to pay for the fossil fuels without jeopardising our economic growth in the future?

In Western Australia, electricity is mainly generated by using three natural resources—oil, gas and coal. They provide 98 per cent of the total energy that is required.

Debate adjourned, pursuant to temporary orders.