

## RENEWABLE ENERGY

### *Motion*

Resumed from 17 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.

**The PRESIDENT:** The first motion on notice is “Renewable energy sources—development” and the continuation of the remarks of Hon Helen Bullock. We note that there is one minute and 59 seconds left.

**Hon Helen Bullock:** One hour!

**The PRESIDENT:** There is one hour and 59 minutes left on this debate.

**HON HELEN BULLOCK (Mining and Pastoral)** [2.13 pm]: Mr President, thank you for your kindness in giving me a second chance to finish my remarks this week!

To summarise the remarks that I have made so far, although Western Australia has abundant fossil fuel natural energy resources, the ever increasing demand for fossil fuels will require us to question ourselves about our future energy security. In Western Australia, electricity is generated by using three natural fossil fuel resources—oil, gas and coal. They provide 98 per cent of the total energy consumed in Western Australia; the other two per cent, as I have mentioned, is generated from renewable energy sources. At the moment we have enough reserves of these natural resources to last us for another 50 years; some say 90 years. Let us say that they are right; let us just believe them. However, the demand for these natural resources will increase dramatically in the future at both the national and international level and this demand will put a great deal of pressure on the supply of these fossil fuels.

The price of oil is totally beyond our control. I hope members have noticed that whenever there is uneasiness in the Middle East, the oil price soars. We are too reliant on energy imports from those politically unstable countries. There is no doubt that the price of oil in the future will continue to go up due to both increased demand and decreased reserves. I think this government knows very well that the recent increase in the price of gas is far from enough. AlintaGas wanted a 40 per cent increase —

**Hon Kate Doust:** Thirty per cent.

**Hon HELEN BULLOCK:** It does not matter whether it is a 30 or a 10 per cent increase, the question is: will it be enough, even if the price increases by 30 per cent in the next few years? Yes, we have plenty of gas reserves in this country. At the moment, we export most of it to the international market. Gas fetches a very good price on the international market. I think in the future the increased demand for gas will put pressure on or test the existing 15 per cent domestic gas reserves policy because all that gas could be sold on the international market for a very, very good price. I am glad the Premier recently made the decision to retain the 15 per cent domestic gas reservation policy. It is a good policy and I think that it should be retained for some time.

Australia is a big exporter of coal. Western Australia uses only 13 per cent of its coal production to generate electricity. Let us admit that coal is the most unclean source of energy. I have no doubt that watching those power stations’ big chimneys blow carbon dioxide into our atmosphere 24 hours a day, 365 days a year is enough to turn even the staunchest Liberal member into a Green!

**Hon Matt Benson-Lidholm** interjected.

**Hon HELEN BULLOCK:** Our source of energy is affected by demand and supply on the international market and this will affect our future economic growth. In order to secure our future economic growth, we need to find another means to build an independent energy industry free from price fluctuations on the international market and that will reduce our reliance on fossil fuels as our primary energy source. The solution lies with the development of renewable energy sources. There is no doubt that in the long run, renewable energy will play an important part in the future economic development of this country. It is inevitable not because I think that we can do much to change the temperature of this earth but because the ever-increasing demand for energy resources will put those resources beyond our reach and thus jeopardise our future economic growth. Sustainable economic growth requires us to have energy security. Energy security requires us to look at alternative, independent, self-reliant, renewable sources of energy.

If that reason alone is not enough to convince the government to put more effort into developing our own renewable energy industry, here is another: members know that I am a very proud Australian citizen, but it seems to me that Australians sometimes lack the forward thinking, the will and the drive to be the world’s

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number one in many fields when we have the potential to do so. This is a very wealthy country. However, our economy is totally dependent on exporting raw materials to developing countries instead of thinking about Australia's future economic directions during the good times while the mining boom lasts. All we are doing at the moment is crossing our fingers hoping that demand from China will never die. We are also very optimistic that India or Pakistan will enable us to continue to be prosperous in the future. Basically, we are hoping that when the tiger that we are riding on at the moment runs out of steam, we will be able to get off and take a joyride on another economic tiger. We must understand that the future economic growth in all advanced countries lies in the development of hi-tech industries, and the renewable energy industry is a good example of that. We should not consider that renewable energy's mission is to save the world from the effects of climate change; we should see it as an opportunity to build a world-class, highly efficient, energy secure technology-based new economy. In the past, I have persistently called for building our own manufacturing industries. This is a potential opportunity to build a hi-tech renewable manufacturing industry that would generate jobs and provide potential export opportunities.

According to a 2010 report by Pew Charitable Trusts titled "Who's Winning the Clean Energy Race?", over the past five years, the clean energy economy has emerged around the world as a major new opportunity for investment, manufacturing, jobs and environmental protection. According to my notes, the report states at page 4 —

Worldwide, the clean energy sector roared back from flat recessionary levels, increasing 30% above 2009 levels to achieve a record \$243 billion worth of finance and investment in 2010.

Worldwide investments, excluding research and development in clean energy are 630% greater than they were seven years ago, and there have been notable shifts in global competition as investment moves from established markets in the developed countries to dynamic, emerging markets in the developing world.

Realising the potential growth within the renewable energy sector, countries such as Germany and China have adopted an aggressive investment policy to secure their economic growth. According to my notes, the Pew report also states —

China's continued ability to attract record levels of clean energy investment has made it the global clean energy superpower. The nation's ascendance has been steady and steep. In 2005, China attracted less than \$3 billion worth of private investments in clean energy. In 2009, China led the world for the first time, with \$39.1 billion invested. In 2010, investment in China's clean energy sector increased to a record \$54.4 billion, 39% higher than 2009 levels. 2010 clean energy investments in China alone are equal to total global investments in 2004.

Listen to this —

In 2010, it accounted for almost 50% of all manufacturing of solar modules and wind turbines. China's installation of less than 1 GW of solar energy capacity demonstrates that most of its production is for export markets.

That is why it is not all about saving the environment; saving the environment is just a by-product. It is the commercial benefits and the potential for new export markets and job generation that has attracted such attention. China is putting in every effort to create its own self-reliant energy industry because it has realised that it needs energy security to underpin its future economic growth if the country is to continue to grow and that it must find new economies to solve its unemployment problem. At the same time, the renewable energy sources are reducing the country's pollution and providing cleaner air.

During the winter recess I visited a wind farm in Frenchman Bay in Albany. All the wind turbines are engineered and made in Germany, which we all know is famous for manufacturing hi-tech equipment. Going back to what I said about us as Australians lacking the will and the drive to be the world's number one in the hi-tech field, my question is: what do we not have or what is stopping us from seizing the opportunity to develop a new world-class, highly efficient energy secure technology-based economy? Nothing. This is a new industry that will generate jobs and secure and sustain our economic growth when the mining industry is in decline.

To summarise, I support this motion on two grounds. Firstly, our future economic growth requires us to build our independent primary industries—renewable energy is one of them—to reduce our reliance on foreign sources of energy imports and be free from competing for limited fossil fuel reserves in the future international market. Secondly, the renewable energy industry should be seen as an opportunity to develop a world-class, highly efficient, hi-tech-based new economy in the manufacturing industry that will generate jobs. This government should do more to facilitate the development of this new industry rather than just allocating ad hoc a few million dollars in the budget to build a few windmills.

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**HON MAX TRENORDEN (Agricultural)** [2.29 pm]: I have been looking forward to this debate for a while. It is rare that the Leader of the House looks at me and is not worried about how long I will speak for!

**Hon Norman Moore:** I have been looking forward to your speech for a long time, too, Max!

**Hon Simon O'Brien:** And I'm going to move for an extension!

**Hon MAX TRENORDEN:** I am pleased that everyone is looking forward to my speech, and I am too. I say at the outset that I am a massive fan of renewable energy and that I spend a lot of my waking hours looking at the issue.

Mr President, as you are probably aware and as I have stated in this chamber, I went to Germany, the United Kingdom and the United States in November last year to look at renewable energy. I therefore think I can say some of the things I intend to say with some degree of authority. The first thing is to get down to the politics of it. The motion before the house reads —

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 take immediate steps to make sure Western Australia is at the cutting edge of the use of wind, solar, geothermal and wave and tidal power.

I can only assume that “the government” referred to in the motion is the federal government.

**Hon Kate Doust:** No; it's the state government.

**Hon MAX TRENORDEN:** That is the only reasonable assumption that I can make.

**Hon Kate Doust:** If I'd wanted to refer to the federal government, I would have said so, but it's the state government.

**Hon MAX TRENORDEN:** I understand that, but I am having my cheap shot!

**Hon Kate Doust:** Lots of cheap shots!

**Hon MAX TRENORDEN:** Hon Kate Doust will let me do that —

**Hon Kate Doust:** I will.

**Hon MAX TRENORDEN:** — because most people will have a view about what is happening in the federal sphere. The problem in the federal sphere is that the federal government is promoting a Robin Hood tax. The argument for a carbon tax is that it will tax polluters and give 55 per cent of that money to consumers, which is a self-defeating prophecy. Let me just go through that process.

A total of 55 per cent of the money raised from the carbon tax will go to households. There have been many surveys in recent times, but the most recent one in *The West Australian* just a few days ago said that about 70 per cent of people asked about their reaction to the carbon tax said, “I will make no change to the way I consume energy.” Let us think about that. A large percentage of people who are in state housing or in private rental properties would have no real opportunity to change the way they consume energy. People who live in a rented house that has an electric heater, people who live in an old home that faces the wrong direction and is inefficient for keeping internal energy or people who live in an inefficient house full stop, do not have a lot of options. Is one option to say to these people, “Turn your heater off and put a blanket on”? To some degree that is a reasonable argument. However, like all members, elderly people in my constituency are ringing me right now telling me they are freezing, because they do not seem to have any other option than to turn off their heater. They cannot make a conscious decision to buy a five-star or six-star rating appliance. They cannot get into that game; it is not available to them.

We must therefore be serious about this issue of 55 per cent of the carbon tax going back to consumers. It is pretty clear that it will not have much effect on the consumption of power. It is really about trying to make the people who will receive it become comfortable with the carbon tax. Then 10 per cent of the tax will be lost to administration—all members will understand that. The figure that will go to the major polluters—I did know it but members might interject and tell me—is about 20 per cent and is a core part of the carbon tax. Do the maths! When we add all those figures up, how much does it leave for renewables? The answer is: precious little. In structuring a carbon tax and having an eye to the future on energy use, I thought the federal government would have structured the carbon tax to enable renewables to become viable and competitive in a future system; but it has not done that and has no intention of doing that.

Members might discount what I am about to say, but I was open to the argument for a carbon tax. My view is that I am prepared to consider an efficient process that can be proved. This motion is not about a carbon tax, but I raise it—you will be impressed with this, Mr President—to speak to the motion, which is something all members do from time to time, and I will forget about it very shortly. I will talk about renewable energy in

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Germany, the UK and the USA shortly, but I wonder, given the framework of this nation, how we can do that. I am as frustrated as anyone is. However, I suggest, in some attempt to be fair, that the Minister for Energy sitting in this place is probably the most frustrated person in the room. He is the one who has been given the task of delivering the projections into the future and he is the one who has to go to cabinet and win the arguments. He is the one who has to stare down an ever-increasing angry public on the cost of energy, and that argument is not going to go away. The issue for me is that there is a capital cost to introducing renewables: people have to do the research, they have to build them and put them together and they have to get the capacity in numbers to reduce that cost. There is therefore a significant capital cost to introducing renewables, which has not been considered either by the federal government or by most governments around the world. The truth is that people do not want to pay for power.

Getting back to the point about paying for power, there is a gap between the base cost of power and the cost of renewable power. In some cases it is between 15c and 20c a unit. As passionate as I am, therefore, for renewables, particularly solar, there is that gap. It cannot be denied that it is a significant gap.

**Hon Adele Farina:** I am sorry, I missed that. What was the gap?

**Hon MAX TRENORDEN:** The actual cost of generating the power. It is said that the cost of coal-generated power is now about 7c or 8c a unit and solar is somewhere higher than 20c a unit. Solar will not always be higher than 20c, but that is why I brought in the point about capital costs. Whoever invents this stuff needs a return on their capital—every member of the chamber understands that. At some stage there has to be a charge for it not only for a return on the capital, but also to reinvest, to reproduce and to get enough production out there so that the cost is not 20c or 25c a unit. The real cost of thermal energy is probably 25c a unit. People must buy solar energy in mass numbers for the cost per unit to reduce from 20c to 15c. We all know that we will not argue about that issue, as I am sure we would all instantly agree with that argument.

**Hon Helen Bullock:** That is why you need government to introduce tariffs to subsidise it in the beginning.

**Hon MAX TRENORDEN:** With all due respect to Hon Helen Bullock, there is no such thing as government money; it is all taxpayers' money. We do not have money. One of the problems I have grappled with in my 25 years in Parliament is that we do not have any money. We take money off taxpayers, circulate it around and give it back—or do not give it back. Therefore, if government is filling up that gap, that money still has to come from somewhere.

**Hon Helen Bullock:** We have plenty! We waste too much!

**Hon MAX TRENORDEN:** We do not waste money, but that is a debate for another time. I have a passion for renewables and I want to talk about renewables.

The money that we spend on green cards, feed-in tariffs, or whatever subsidy the debate is about, does not come from the stratosphere; it comes from taxpayers, from businesses and from the general community. The general community therefore has an interest in what we do about that. The people complaining now about the cost of energy have a right to complain about the cost of energy; it affects their livelihood. However, it makes it very hard to say to people, "Look, we'd like to shut down Collie but your solar power is going to be three times more expensive. Instead of paying \$1 500 a year, you won't mind paying \$5 000."

**Hon Phil Edman:** They might say they don't want to pay it.

**Hon MAX TRENORDEN:** They might say that they do not want to pay \$5 000. For people who are passionate about renewables, like I am, that is a significant gap. I am not trying to have a go at Hon Helen Bullock, but the gap cannot be filled by "the government". There has to be a mechanism, when we think it through, that makes renewables economically viable, and I will talk about that very shortly.

Before I went to Germany, I went to quite a few seminars around Perth and heard about Germany's wonderful feed-in system. When I got to Germany I found out that the cost of energy in Germany is 30 per cent higher than the production costs of power, and the Germans are up in arms and revolting about that. Why is that? The Germans were reasonably happy to pay the 30 per cent for a reason that we cannot put to our consumers: it is because they have a pipeline that runs into Russia and a man called Putin who likes to turn that tap off and turn that tap on. Consumers are terrified that their security of power is in somebody else's hands. So, there is a passion in Germany about renewables, and there is a passion there about getting it done.

But there is also a passion about the hip-pocket, because Greece is asking for money, Portugal is asking for money, Italy is asking for money, Spain is now lining up, and, on top of all of that, France is probably going to line up. The Germans are saying, "Whoa! Not only am I having to pay the extra costs of renewables, I am going to have to pay to put Greece back on its feet, Portugal back on its feet, and Ireland back on its feet." There is a movement, and members only have to get on the internet and look at the German press and they will see what I am saying is absolutely correct. But at the same time there is a strong emotion in Germany for renewables, it is

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just that the economic pressures are now hitting Germany and they are hard for Germany. I can say this, because I do not mind who garrottes me tomorrow: Germany is the only major economy in Europe that is holding up. The Germans are looking at paying for just about everything, and it is terrifying them. It cannot be denied that those types of economic situations impact on this question of renewables.

I had a fantastic meeting in the United Kingdom with the Department of Energy and Climate Change, and it was very frank with me. The United Kingdom is talking about putting 500 000 wind generators on the North Sea banks. That means that when people who live on the east coast of the UK look out to sea, they are going to see a wall of steel. That is starting to bite for the English, because when I was there—I did bring a copy of one of the newspaper reports back—there was a report about how the turning turbines were chopping up the seals and how terrible that was. If members think about that, that is not going to happen. I mean, logically, those blades are not chopping up the seals, but that is reported in the paper; that is what people are concerned about. People are concerned about seabirds flying into the rotors and being killed. All of those issues impact upon the decision to put 500 000 turbines into the ocean. They also said to me that they were not marine turbines; people are just getting around to developing marine turbines now. These are land turbines that will be put into the ocean, and they will have a shorter life—they do not know how long—because they are not designed to be in saltwater.

**Hon Adele Farina:** It can wreck them.

**Hon MAX TRENORDEN:** But they are so keen to do it. In UK, like everywhere else, security of energy is really important, and we can understand that. So when they look out there, turbines are a logical response to the problem. But the good man who gave me his time, who was very high up in the agency—I really do not want to name him because he was very decent to me and told me things off the shoulder—said to me, “Whatever the cost has been of putting the grid into the UK, there is going to have to be a six per cent spend to take the power from those 500 000 turbines, because the system has to be made smart.” So the system has to be able to take alternating power and a non-consistent driver of that power; it will have to take surge.

**Hon Adele Farina:** But the technology is there to do that.

**Hon MAX TRENORDEN:** Yes, but we have to pay to put it in. Yes, it can done—no question. But the UK government is going to have to find that money. Six per cent of whatever has been spent is billions of pounds.

**Hon Helen Bullock:** Encourage private investment, if you have the right policies.

**Hon MAX TRENORDEN:** How is private investment going to do that? Where is private investment going to get the income? I have heard Hon Helen Bullock arguing in other debates that private investors should get a return of 15 per cent; guess who pays the 15 per cent? The consumer! That is who pays the 15 per cent. As much as the member rattles that off, it cannot be done and it cannot be a factual outcome. If Hon Helen Bullock was sitting where the minister is sitting, she would not be arguing that point because she could not deliver it.

**Hon Adele Farina:** But your argument is based on the assumption that we are never going to run out of coal or oil.

**Hon MAX TRENORDEN:** No, that is why I am a fan of renewables. I am not trying to say these things because I am opposed to them; I am just saying that these are the difficulties we face in trying to introduce renewables, and we have to be real about it.

I went to Oregon and looked at marine power. In the USA they were putting 10 buoys into the ocean to generate wave power, which is a fantastic program run by Ocean Power Technologies; it is a really, really interesting program. But the Americans were not going to put a single wind station in. Do members know why? It is because they are Chinese-made. Every wind power generator bought has been built in China, and the Chinese get the jobs. The technology comes out of China, not America. The number one issue in the United States right now is jobs, so in the eyes of Americans it is very clear that they should not do something if it does not increase the base local economy, and power generation does not do that because the generators are not being purchased from America, they are being purchased from China. Those things are part of the decision-making program.

Right now, the problem we have is that if people want to put a power station in Western Australia or the eastern states or Germany or the UK, coal, gas or wind could be put in because there is a whole raft of knowns in that process. We know how to plan for them, we know how to bankroll them—so there is a known bankable process—and we know how to install them. We know all about them. But if we go to Dongara, as I would like to, and talk about putting in 300 megawatts of geothermal power, there is no way of bankrolling it, because banks do not bank geothermal in Australia; they bank wind power, but they do not bank geothermal and they do not bank solar. So, unless it is coal, gas or wind, it is not really in the program right now, which really upsets me. It goes back to what I am trying to say, which is that I am a fan of renewables.

**Hon Adele Farina:** You need to do something about changing that.

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**Hon MAX TRENORDEN:** I will talk about that in a moment.

That is an important thing to understand, because, I say to Hon Helen Bullock, if a private investor wants to put in a solar plant, somebody has to bank it. Going back to the UK argument, we cannot have governments that flick between green certificates and feed-in tariffs, because that terrifies bankers. Bankers are saying, “Well, if in three years’ time the government is going to change the way they fund this, why should we fund you now?”

**Hon Adele Farina:** Exactly.

**Hon MAX TRENORDEN:** That is one of the problems. In the UK people were talking about going from a feed-in tariff to a green certificate process, basically, I think, because one is government, one is opposition, and if the government is in, the opposition has a different idea. I am not sure that will happen, but it does actually affect the things we want to do, because if people cannot go to a bank and get an assured process with a renewable energy source, they are in trouble. We need to think about developing that. I am not trying to lecture a minister in the chamber now, but people in his position and the federal people in that position need to think that there has to be consistency whereby private enterprise, and the government for that matter, can go to individuals and get projects backed. It is a really important issue.

Carnegie Wave Energy Ltd at Fremantle is soldiering away. It has fantastic people who are doing a fantastic job. I can guarantee that if they went to Geraldton now and said that they wanted to put a wave power station off the new Oakajee port—I will not argue about that, but let us just say that that is the case—they would more than struggle to get finance; and, if it were financed, it would not be financed by Australians, it would probably be financed by the Chinese. That is something we really have to think about. This speech sounds like the most negative speech about renewables, but we have to think about these things. On top of that, we have the cost of transmission, distribution and smart energy, which has to be put into this equation. We cannot just talk about the difference between the baseload cost of power and the cost of renewables. We have to add to that the cost of distribution, transmission and smart technology. We had a storm event in this state in the area where I live in the Wheatbelt. It brought down 181 power poles. Do members know why those power poles fell down? They fell down because they were bloody rotten! They fell down because we had not done our maintenance and we did not keep revenue going into the right areas, and so the infrastructure failed. Right now—it is not just the poles in my electorate; it is the poles in the suburbs in the metropolitan area, which all come under the same regime—that infrastructure has to be replaced. The transmission infrastructure is not as difficult to deal with. Luckily, we have kept up with the maintenance of the transmission infrastructure, because, basically, if we did not, we would not have power. Distribution infrastructure, whether in the metropolitan area or in country areas, is a serious problem; we have not kept up the money. Future governments or this government—we cannot go too much further—have to put money into distribution.

**Hon Adele Farina:** The previous government put in \$1.3 million.

**Hon MAX TRENORDEN:** It will have to be a lot more than that. There are 600 000 power poles.

**Hon Adele Farina:** But we put in at least \$1.3 million.

**Hon MAX TRENORDEN:** But that is nowhere near enough.

**Hon Helen Bullock:** You just talked about consistency.

**Hon MAX TRENORDEN:** I am sorry. I have blocked ears; I have a head cold.

**Hon Adele Farina:** She was saying that you need to continue doing the maintenance work.

**Hon MAX TRENORDEN:** Exactly. There are 600 000 poles out there. Most of them are 40 years old and over. They are not going to hang around forever. The point is that we cannot just ignore them because they will fall over in their hundreds, as they did in the Wheatbelt. It is serious. We also have to bring in smart technology. When we built the star system that is in Collie and that is generated everywhere, the argument was that power went one way. But if we are to get smart about how matters operate, power has to flow both ways. All those transformers, all that switching gear and all that technology have to be changed at some stage. It is going to cost a lot of money.

**Hon Adele Farina:** But that’s not an argument not to do it.

**Hon MAX TRENORDEN:** No; we have to do it. I am not arguing with that. I am going to run out of time. What was Tom’s record?

**Hon Adele Farina:** You’ve got an extension of time. Hon Simon O’Brien has already promised you that.

**Hon MAX TRENORDEN:** I think the record is a couple of days, is it not, Mr President?

**The PRESIDENT:** Is that for a speech?

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**Hon MAX TRENORDEN:** Yes.

**The PRESIDENT:** You do not have anywhere near that time!

**Hon MAX TRENORDEN:** I am pleased to hear that.

Those questions are important. The Australian Energy Regulator, which regulates only the eastern states' grid because we are not connected to it, is saying right now—members can read it on its website—that the cost of those three issues that I have just raised will increase the domestic bill now by 30 per cent. Without worrying about renewables or anything else, the cost of energy will have to go up by 30 per cent to meet the lack of expenditure on infrastructure and maintenance. Do members think that consumers will like that? I would like to gently say to them, “How about us putting up your price by 10 per cent so we can have a few renewables?” But there are a lot of things in the queue before renewables. On top of that, there is Paul Murray's argument in today's *The West Australian* about Collie and the efficiency of black coal over brown coal and the efficiency of brand-new generation over old generation. If it is true—I am only reading the article—that the federal government will not fund that —

**Hon Peter Collier:** It won't.

**Hon MAX TRENORDEN:** — who is going to pay that bill?

**Hon Peter Collier:** We're not getting a cent.

**Hon MAX TRENORDEN:** I am sure that is right, minister. So who is going to pay that bill? It will be the same consumer who is complaining about it right now.

**Hon Peter Collier:** We do.

**Hon MAX TRENORDEN:** But the minister does not have any money; it is the people's money. That will be a significant amount of money. The minister has just made an interjection. It is clear that the state will have to pick that up in one form or another. Guess what the state will do with that? It will pass on to consumers the extra costs over and above the current charge in the south west interconnected system.

I will just quickly run over where I have been. We need look only at the media in Germany to see that the Germans are changing their view. As the financial crunch hits their community, they are changing their view. They do not dislike renewables and they still do not like nuclear; that has not changed. More importantly, they are worried about feeding their children and paying their mortgages—the basic things that individuals are concerned about. The argument is no different in the United Kingdom or in the United States. In the United States, it is difficult.

I have run out a heap of negatives. I now want to get on to the positives. Hon Philip Gardiner and I have been spending a lot of time around Geraldton. I know that several other members of this chamber have a bit of interest in what we have been saying in Geraldton.

**Hon Kate Doust:** We tried to help in your electorate.

**Hon MAX TRENORDEN:** I appreciate the member's knowledge of what we are trying to do. What we are trying to put to and get accepted by the Geraldton community—it has been very strongly accepted where we have been—is that if a brand-new grid were built around Geraldton, it would be new so it would already have smart technology and all those issues. The infrastructure would be new. The projections for mining in the Mid West go from the current usage of 400 megawatts of power to 16 000 megawatts of power in seven or eight years. I will repeat that—400 to 16 000 megawatts. It is said in that argument, quite rightly, that not all those mines will start. Let us say that a quarter of them start and the usage goes from 400 to 4 000. That would make the Geraldton grid as big as the SWIS, including Perth. It would be the same size, basically. But if the Yilgarn group of miners were added to that patch, the amount of power would go to 20 000 or 30 000 megawatts. That is a massive amount of power. That is an opportunity. If we were able to establish a brand-new grid around the Mid West and Yilgarn and have it managed by the local area, renewables could be introduced without all the negatives that I have just outlined. If those new mines—I have not counted them, but there are somewhere between 10 and 20—did not have to put in the capital for their own generation, they would be prepared to pay the difference between the basic price and the cost of renewables. That is an economic argument, I say to Hon Helen Bullock. That is a way that private enterprise can get in, because the consumer and the miners have the capacity to pay that difference. It is in their interest to pay the difference, particularly if there is new infrastructure delivering power to the mine site and the line does not have to come all the distance from Collie with all the risk of a single supply line from Collie, which is unacceptable. Also, for the miners, the story of gas is frightening. Quite rightly, the mining companies—this is their view, not my view—do not want to rely on gas because they believe that the price of gas will keep going up. Somewhere along the line, the cost of generation using gas will be prohibitive. That is not a bad argument.

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Some of the best ground for geothermal energy in Australia is in Dongara. It has some of the best ground in Australia because it has been substantially drilled by the oil and gas industry. It knows what is under the ground. To generate power using geothermal energy, we need to have a shear in the land, which is at Dongara, so that water can go down to the interface of hot rocks. I stood with a director of a company in Germany who is also a director of a company here in Perth on a rig in Germany that was drilling five kilovolts into a similar formation. He said that those formations are pretty much identical. Geothermal energy can play a big role in the Mid West and the Yilgarn area.

We have a great opportunity to make use of solar energy, but part of the problem for the mining industries is that they want to do most of their production work—that is, mining for magnetite—at night. To get the bulk of their product out, they want to run their mills as hard as they can at night because they can do their maintenance and take care of all the other issues during daylight hours. That does not cut out solar energy because we still need power during the day but it takes the edge off solar energy until someone can devise a way of storing solar energy. At the moment it is generated by heating salt or graphite and there are a range of other issues. As sure as the sun will come up tomorrow morning, someone will solve that problem but it has not been solved yet. It is not efficient to use solar energy 24 hours a day. It has its limitations.

I am a big fan of marine power but it is not baseload power. Baseload power is important to miners because they need that consistency. Carnegie, Ocean Power Technologies and others are saying that Geraldton is a highly efficient area for the use of marine power; actually, not really marine power because it includes tidal power and it is not good for tidal power but it is good for wave power. The expected generation in the Geraldton region is between 70 and 80 per cent. If we have Oakajee operating off the groyne, we could put in a range of wave power generators that would be ideal for the Oakajee site and the commercial activities that are going to happen around Oakajee. Then we can run through the other alternatives. One of them is for the gas pipeline to run clean through the Mid West. The Kalgoorlie extension runs across the top of the Mid West. There are opportunities for gas. There is also coal under the ground up there. There is also gas under the ground at Dongara. Small gas fields will not be viable for the general commercial use of gas but they might be viable for a single turbine creating power. We have an opportunity in the Mid West area to expand the generation from renewables.

**Hon Adele Farina:** Why aren't we doing that then?

**Hon MAX TRENORDEN:** I do not want to be too hard, even though it is often fun to be hard, but I do not think the eastern states are seriously looking at the opportunities here, even Carnegie, because we are Western Australia. We always have that loss one way or another. I will be very surprised if there is a region in Australia that could take as much renewable energy as the Mid West. In all probability, that one region, the Mid West, could produce all of Western Australia's requirement for 2020 and a big slice of the federal government's requirement for 2020.

**Hon Adele Farina:** Is the Mid West Development Commission looking at it?

**Hon MAX TRENORDEN:** Yes, it is, as is the Geraldton council. We have been around that circle, as Hon Matt Benson-Lidholm knows. I would love to get Hon Matt Benson-Lidholm involved in some of this because we are not doing this on a political basis. We have not spoken to the Premier about this. We are doing this as local members. I have only marginally spoken to the minister about this. We are trying to get the Mid West to see the scope of its opportunity. The 330-kilovolt line that has been argued will run into this area is important. I think it is more important not to bring power into the Mid West but to bring power out of the Mid West in the future and bring it back down to Perth. That is the advantage of that line in a short number of years. These mines will go ahead.

In my view—Hon Phil Gardiner will speak for himself—OPR is in a fair bit of strife but that does not mean that Oakajee is in any strife. There is so much mining capacity that people want to get up and going that Oakajee will be funded one way or another in the short term. In my view, no time will be lost with Oakajee. There has been some argument about the Chinese. I do not have an argument about the Chinese but some people do. I think it will be funded by the Chinese system because China wants the iron ore. It is pretty simple.

Going back to the issues, I read some years ago that Americans are very concerned about Texas. One hundred years ago it was 90 per cent foreign owned. Now it is nearly 100 per cent American owned. We cannot pick up land and take it to China. The ownership is not really an issue for me; it is more about getting it going. Once we get it going, we can deal with those issues. I think those opportunities will happen. The Mid West of our state is just such an exciting prospect. If we take the line around Morawa and Mullewa and head inland to places such as Menzies and Cue, there is mine after prospective mine all the way. There is not a great deal of distance from one prospective mine to another. We go wrong when we talk to each of these mine owners individually and ask them what they are going to do about roads, rail and power instead of talking to 20 mine owners and collectively asking what we can do about power, roads and rail. The argument that Hon Phil Gardiner and I are projecting is



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that we should take the new line that is going into the Karara mine and keep it going either to Menzies or to an extension up near Koolyanobbing. A line runs out from the main line to Koolyanobbing. I am not an engineer so I do not want to say which line that should be. If the rail was connected from Geraldton to Esperance, what a great boon to the state that would be. What about the mines along that line that cannot get a go because they are small mines? They do not have to be iron ore mines.

**Hon Kate Doust:** Who are you suggesting would pay for that extension of the line?

**Hon MAX TRENORDEN:** Primary industry. There are people out there, including Australian rail operators, who would put that rail in tomorrow if we let them. The trick is that we have to let them. Our problem now is that we are concentrating on mine by mine. That is what we have always done. We have had mining agreements and we have always done the deal mine by mine. In this case because we have two regions, the Mid West and the Yilgarn, that have such fantastic opportunities, we should be developing that as one planning exercise and have one goal in mind. The rewards to the state are just immense. We are talking about places like Cue, Menzies and a whole raft of towns across the 500 kilometres of line between Mullewa and Morawa, and also the other line, Menzies–Cue–Meekatharra et cetera. What a great boon to the state that would be, but I am telling members that we are not doing that and we should be.

Getting back to the point, my argument about renewables is that we should pick areas like that where it is obviously logical and economic to bring in the renewables. Mrs Smith down the road, in whichever suburb in Perth she is living, will not have to pay the price on her bill for the power that is going into that mine in Yilgarn or the Mid West. That is very important. As Hon Helen Bullock was trying to say some minutes ago—let private enterprise do it; but that is in a context where it is bankable, and right now, the Chinese will back it, almost without doubt. It is easy—no, nothing is easy in planning, but the concept is easy in planning; the practicality is somewhat different. Much of the corridors are already there, so why are we not doing it? It is a fantastic opportunity.

Even though much of my early address was about the negatives, we cannot ignore those negatives. They are going to spill into your bill and my bill whether or not we like it. There is going to be a cost of throwing that switch tomorrow morning. If part of that cost to move to a brave new world of renewables, which I am clearly heavily in favour of, is allowing the developers of those renewables to raise capital, to connect to a grid and to sell their product, then we have to do things somewhat differently from what we are doing now and, as much as we can, we have to do it without including the domestic tariff.

I have doubts about the carbon tax; I think it is wrongly structured. Members opposite probably could have won me over if there was a much bigger component to renewables in that tax, but there is not. I would also argue that if we look to what the other countries in the world are doing—localised grids, localised charging and localised generation—this is the logical way to go, because we need to spend money only in that locality; we do not have to spend it across the rest of the state.

I do not support the motion because of the issues I have outlined and because I do not think it is as simple as the statement in the motion.

**HON MATT BENSON-LIDHOLM (Agricultural)** [3.12 pm]: I thank Hon Max Trenorden for some of the comments that he made. I have an issue with some of them. I understand we do not have a lot of time left on this motion, despite what the debate clock says, so I will be as succinct as I possibly can. I want to correct the record as far as the opposition is concerned in relation to a carbon tax. The simple thing about the carbon tax—if there is such a thing—is that it is a market-based mechanism. Even Mr Malcolm Turnbull is a big supporter of market-based mechanisms to control pollution and to help us sustain some sort of a clean, green economy. Generally speaking, the issue with market-based mechanisms is that if companies are to stay competitive and reduce their cost structures, the one thing they have to do is look at better ways of doing things. If companies can do that, then fairly obviously what they are going to be able to do in response to a tax is significantly reduce the effect or the impact that particular tax will have on their enterprise. That is what that particular system is basically designed to do. In the medium to long term the people of Australia will be the significant beneficiaries of that particular package.

Hon Max Trenorden certainly is very much a fan, as am I, of the capacity for the Mid West to deliver so much to our state. It is a very complex issue, and he did make one particular point that I have to reiterate. It is something that Hon Kate Doust and I have made mention of in this chamber on a number of occasions; that is, the need to put power back into our south west interconnected system; it is not taking power to Geraldton. The idea is that if we can develop and implement a new 330-kilovolt powerline from Eneabba to Geraldton we will be able to feed back into the grid the enormous energy supplies—or the potential that exists in Geraldton and the Mid West. On that particular point, I agree wholeheartedly with Hon Max Trenorden. As the member said, it is not about bringing power to the Mid West; it is about utilising the enormous potential in that particular part of the world.

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My words today basically revolve around the Mid West but also a little closer to home. I have a micro issue and a macro issue that I want to spend a bit of time talking about. Certainly, getting back to the Mid West initially, the enormous potential in this region is well documented and the energy requirements of the state I believe can be significantly developed in a renewable capacity by utilising the strengths of that part of the world. This, of course, is not necessarily going to happen overnight, and I suppose the essence of Hon Kate Doust's motion is that what governments need to do is develop a macro or big picture approach to energy supplies, particularly in the more populated part of the south west of Western Australia. The issue for me is recognising the potential that we have in these sorts of places, and then doing something about it. It is obviously going to cost money.

We do have a problem at present with state debt, but if I can use the line Hon Simon O'Brien gave to me a few weeks ago, his comment was, "If we can afford to pay the debt off, then we do not have a problem." I question that, but if the intent of the government is to spend more money, then it will not get a better investment in the medium to long term than by putting in a 330-kilovolt powerline to Geraldton from Eneabba. Let us have that particular powerline and let us have it now. The only problem I have is that that particular decision seems to be some time off because, as is reported in recent editions of the *Geraldton Guardian*, it would appear as though the Minister for Energy and the government have adopted a just-in-time approach. That particular just-in-time approach, given the complexity of the issues associated with Geraldton and the Mid West, is something that I know does not sit too well. One only has to view current media publications in the Mid West to understand that there is an enormous level of frustration prevailing in that part of the world.

I will get back to the Mid West shortly, but I have another particularly pressing personal issue with respect to this particular motion, and it stems from some contact that was made with my office late last year. The gentleman concerned does not mind me mentioning his name. His name is Mr Barrie Price and he lives at Bakers Hill. After discussing this with my office over the phone, I received the following email from Mr Price. It is a pity that the minister is not here because this really is directed towards him.

**Hon Norman Moore:** He is outside on urgent parliamentary business.

**Hon MATT BENSON-LIDHOLM:** That is understandable. At the end of day, the minister gave me an assurance, particularly after a subsequent question, that this issue would be addressed. To me, this underpins the approach of much of what the government is about. It is about headlines, but it is not necessarily about getting down to the nitty-gritty. Mr Barrie Price's email reads —

We purchased the property at Lot 269 Jose Rd, Bakers Hill, at a mortgagee auction, and moved in on 6th April 2010. The Property had a 12 Kw solar generator installed some years prior, which synergy was aware of, because they had allowed it to be connected, but refused the previous owners application for REBS or NFTS —

That is, the renewable energy buyback scheme or the net feed-in tariff scheme. To continue —

The system is a brand promoted by a group including synergy, and a WA university. Since installation, about 2007, the system has fed upwards of 14Kw hours into the grid on any given sunny day.

Because it has the capacity greater than 5Kw, Synergy refuses any rebate, in fact charging us for any power we draw from the grid, which amounts to about 4 KwHrs each night. We've been told it's Office of energy policy which allows synergy to refuse REBS —

That is, the renewable energy buyback scheme —

to us.

We have found the frontline staff at Synergy, Western Power, Office of energy, and CEC great to deal with, but with no ability to address the issue, and steady resistance from above has blocked any resolution.

**We supply at least as much power to the grid as any 5Kw system, yet we are refused even the same level of REBS as anyone with a 5Kw system.**

That is wrong, and I believe a lot of people who have chosen a larger system, so they use less non-renewable power, are being penalised, with Synergy getting their excess power free, then onselling it for 100% profit!

If that statement does not sound alarm bells, nothing will. On Monday, 4 October, Mr Price sent another email to my office, which states —

... Just something my wife added after I sent the email. —

That is, the first email —

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Office of energy told her the policy reflected the need to not overload or unbalance the grid. These type of systems monitor the grid voltage, and wind back/shut off rather than overload the grid. They are well developed by the group including synergy.

Therefore, that puts paid to that particular idea. On Saturday, 9 October, another email was forthcoming from Mr Price, which stated —

I received your message —

That is, through my office —

that the shadow minister is looking at the issue.

I think he meant the minister —

That's good news. I had some thoughts which may be of use ...

1 Synergy allow/don't refuse the connection of systems larger than 5 Kw. Many, including our's, have been connected for years. Avante electrical apparently installed this system, so they may be able to confirm the sort of number of systems larger than 5Kw installed.

I asked that question a little later and got a significant figure across Western Australia. The email continues —

2 Synergy do refuse any rebates for systems larger than 5Kw, citing "the policy", which refers to both connection and rebates.

3 Synergy receive free power during the day from these larger systems, but charge other users for this power, for which they have paid nothing. How can that be right?

**Pensioners shouldn't be having their power cut off, while Synergy receives free power!**

I know we are pressed for time, and I have a number of other comments that I could make —

Several members interjected.

**Hon MATT BENSON-LIDHOLM:** All right. I asked the minister question on notice 3775, which was in six parts, on Thursday, 19 May. I asked —

(3) Can you confirm that in order to have a non-commercial alternative energy generating system larger than 5 kW ... connected to the electricity grid, both the control equipment and installation must be accredited and approved by Western Power and Synergy as meeting their required standards?

The minister's response was —

(3) Western Power is required to assess all applications to connect systems in accordance with technical rules as administered by the ERA. If all requirements are met the system is approved.

I asked —

(4) Have there been any instances where problems with system instability can be attributed to the operation of such systems and if so, how many?

(5) What is the evidence that they are the cause of the problem?

(6) What are the direct costs involved to affected utilities from systems instability having been positively identified as caused by alternative energy generating systems?

The minister's response to those three questions was —

(4) There is no direct evidence at this time.

(5)–(6) Not applicable.

The picture does not reflect very well, given the fact that this gentleman has these concerns and that, I think, there is something like 450 or 460 other similar sorts of systems across Western Australia. These people are suffering the same fate as Mr Barrie Price and something should have been done well and truly by now. In the meantime, of course, the feed-in system is being mothballed; it is all too hard. This gentleman even went to the trouble of writing the following letter by email to *The West Australian*. The email to *The West Australian* is dated 4 August 2011 and states —

Your front page article on Monday, August 1st about the ... net feed-in tariff scheme reaching the State government's cap of 150MW ignores the nearly 4MW capacity which the Government has never paid anything for. Synergy has always got free power from at least 487 solar systems —

I stand corrected on that; I did not think it was quite that many. The email continues —

over 5KW capacity. The combined capacity of nearly 4MW gets no feed in tariff, not even as much as they pay for coal generated power. Peter Collier admitted these details on 19th May 2011 ...

Mr Price refers to *Hansard* at that point. The email also states —

What about the people who's power Synergy disconnects when they can't pay for the power Synergy take ... without paying?

That is a pretty damning statement from that gentleman. The minister is listening, so I would not mind if he could address that issue, as he promised me he would some nearly six months ago.

I will not continue with that; I will get on to the macro part of my contribution today—that is, returning to Geraldton and the Mid West. As Hon Max Trenorden clearly pointed out, this is certainly a go-ahead region by any definition. What I find very comforting about Geraldton and the Mid West is that they have a very visionary council in the City of Greater Geraldton. I do not mind saying that that is largely driven by the CEO, Tony Brun. The council understands the needs and the enormous potential of the region and subsequent to that, with Mr Brun's assistance, there is a significant vision for the future of the place. In relation to the issue of energy and the City of Greater Geraldton's vision for the future, I will quote from a document entitled "2029 and Beyond". This is a vision statement that is particularly noteworthy for its focus on the future. The very first part pertains to what "2029 and Beyond" sees as the three fundamental issues and states —

Geraldton is coming to terms with three fundamental issues relating to energy. Firstly, because of the imperative to decrease greenhouse gas emissions associated with climate change, how do we move our society and our economy to low or no carbon emissions when the majority of our energy supplies rely on high-emission fossil fuels?

That is a fairly straightforward sort of a question. It continues —

Secondly, how do we find alternative fuels for a transport dependent economy as fossil oil supplies begin to diminish, become more expensive to import, are subject to global supply fluctuations that create fuel security problems, and we have to compete with major developing economies, particularly China and India, that need rapidly increasing amounts of oil to fuel their economic and social growth? Thirdly—how do we ensure that the Mid West region gains the essential electricity generation, transmission and distribution infrastructure it requires to meet the capacity and supply security needs of our increasingly dispersed and rapidly expanding regional economy?

Continuing with that line, those fundamental issues and the questions raised point us well and truly in the direction of the very motion that Hon Kate Doust has before us today. The vision document that I quote from makes some very relevant and interesting remarks about what it calls "local status". In reference to the Mid West and its local status, the "2029 and Beyond" document states —

*Local Status* — Currently the Mid West is adequately positioned in terms of access to natural gas resources and is confronted with the same supply security and rising cost issues as the rest of Australia for imported liquid fossil fuels. The region is largely dependent on electricity supplies generated in the South West, with insufficient supplies to meet demands, largely due to inadequacy of the transmission infrastructure connecting us to the South West Integrated System (SWIS)—and little likelihood of that problem being solved before 330kV connection to Geraldton, currently unlikely before 2015-16.

You very well understand, Mr Deputy President (Hon Brian Ellis), that energy reliability is one of the biggest problems for the communities on the edge of the south west interconnected system in the northern parts of the Wheatbelt such as Three Springs, Carnamah, Perenjori and other places. A week does not go by without the power going out in places like Perenjori. In the middle of summer when the energy demands are enormous, nothing happens; the power goes off. This government has a just-in-time attitude. Just in time for what—the next power outage?

The next part of the "2029 and Beyond" vision statement refers to local advantages. On this point Hon Max Trenorden made much sense. The document states —

It is in the domain of renewable energy that the Mid West has natural advantages. The Mid West is already home to some of the largest wind farms in the State, and its wind climate offers opportunity for extensive expansion of current capacity. There are significant opportunities for domestic and commercial scale solar water heating, small scale distributed solar-PV and wind electricity generation, and development of large scale Solar-PV and Solar-Thermal generation capabilities. Future exploitation of wind and solar energy resources that are characterised by intermittence in electricity generation levels, would benefit from addition of fast-cycle generation capacity to the network to facilitate load balancing, and requires introduction of smart network technologies to better manage energy supply and demand across the grid. Initial exploration of geothermal energy resources has commenced, potentially

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able to add base-load generation capacity to the network. The coast offers potential for exploitation of wave energy for electricity generation. With such abundant resources the potential for the region to become a net renewable energy export province is very real.

That is an issue I need to stress. To refer to Hon Max Trenorden's statement again, it is obviously not about taking energy to Geraldton and the Mid West; it is about what we can take out of that region to sustain the existence of the rest of the state, particularly when that region already has those advantages.

The vision statement continues —

*Future Demand* — In the near future, large scale demand for energy will flow from the major magnetite mines developing over the next few years. It has been estimated that these mines will require up to 2GW of energy which is roughly the equivalent of the current South West generation capacity. Large demands, coupled with large renewable energy resources, make a strong case for a larger renewable energy industry to be developed in the region. However—exploiting that potential is dependent on ability to export energy into the south west, and that is dependent upon 330kV transmission connection to the SWIS, enhancement of the SWIS with smart grid technologies, and augmentation of fast-cycle generation capabilities in the south west, to enable the SWIS to cope with increased supply of intermittent electricity. The Mid West is not the only region with significant renewable wind, solar and geothermal resources that are being exploited for generation into the SWIS. We compete with other regions for investment in transmission infrastructure and renewable energy investments.

With that in mind, how does one meet that demand? That is the question that the City of Greater Geraldton poses to this government, investors and some of the big companies that are seeking to develop Oakajee and the feeder industries associated with it. That is the local government's slant on things at this point. The City of Greater Geraldton's vision statement continues —

*Meeting the demand* — The major impediments to creating 330kV transmission capability to connect potential renewable generation capacity, and enable adequate electricity supply to the major new mines under development, are capital funding constraints, and competing priorities at Federal and State Government levels.

I will repeat the last part of that sentence —

... and competing priorities at Federal and State Government levels.

I am sure that Hon Max Trenorden made the point about the need for the state and federal government to act together. The statement continues —

The State Government is currently committed to extend its 330kV transmission only as far north as Eneabba seeing the need for 330kV connection further north as being dependent on timing of development of major iron ore mines to the east and north east, and (by implication) the timing of development of the Oakajee Port and its hinterland common user rail infrastructure. With competing infrastructure development demands in the Pilbara and Kimberly, the State will require Federal funding assistance for 330kV connection from Eneabba to Geraldton. A very-best-case assessment, given 2010 directions of the Western Power Mid West Energy Project would not see 330kV connection for Geraldton before 2016. In the interim, major resource project developers are investigating establishment of their own power stations. The City is strongly advocating earlier 330kV connection of Geraldton to the SWIS, and creation of a broader regional grid.

That is somewhat different from what Hon Max Trenorden and Hon Philip Gardiner have been talking about because they were talking about a more regional context. However, the point Hon Max Trenorden made about taking energy out of Geraldton and the Mid West and putting it back into the SWIS, if I am not mistaken, is that it would solve more than just one regional problem; it would solve the energy problems of the entire state, or certainly the built-up area that is serviced by the SWIS.

Finally, the vision statement concludes —

*Future liquid fuels* — In addition to supply of stationary energy the City sees a real need to support regional production of alternative liquid fuels, from renewable feed stocks. The City is closely monitoring innovations in the areas of algae, oil mallee and perennial woody and grass species, and low-water-demand oilseed crops including mustard and camelina varieties potentially capable of