

**ELECTRICITY INDUSTRY AMENDMENT
(ALTERNATIVE ELECTRICITY SERVICES) BILL 2023**

Second Reading

Resumed from 16 August.

MS J.J. SHAW (Swan Hills — Parliamentary Secretary) [11.02 am]: I want to make a contribution today on the Electricity Industry Amendment (Alternative Electricity Services) Bill 2023. I note that I am addressing yet another part of the policy amnesia that the member for Cottesloe seemed to experience last night. The number of times that we are considering electricity sector reform at the moment because of the work that is going on in this space is incredible. As I said, the member for Cottesloe forgot about all that work last night when he moved a motion in this place claiming that no work whatsoever had been done on energy policy reform for the six years of this Labor government. Yet again we are discussing more reform today, so that is manifestly not the case.

As our energy economy undergoes transition, it is very important that we consider all the energy technologies that are available, all the different business models that are emerging and that we adopt the most efficient and cost-effective energy supply solutions possible, because we need to promote innovation and encourage new business models and have new investment in the sector. We also need to make sure that we protect small-use customers because electricity is an essential service and everybody needs it. There is a considerable difference in the bargaining power between small-use consumers and the suppliers of electricity. We need to make sure that we get the balance right. The bill today will provide a registration framework for emerging business models, particularly for non-traditional electricity businesses, and it covers embedded network supply arrangements; that is private electricity networks that sit behind a master meter that services multiple lots or tenancies on one property. Typically, that covers apartment buildings, retirement villages, long-stay residential parks and commercial premises like small and large shopping centres.

The issue of how we deal with these emerging business models came up as part of the Economics and Industry Standing Committee microgrids inquiry. Although it is easy to think of microgrids as little standalone power systems that are on the fringe of the grid, we chose to take quite a broad interpretation of them and look at embedded networks, particularly because the same sorts of consumer protection and vulnerability issues on the fringe of grid would be experienced by an elderly person living in a retirement home, for example. Businesses in shopping centres also raised the difficulties they were having. It is important to ensure that we look after all Western Australians as we consider energy policy reform. Chapter 7 of the microgrids report went into that in quite some detail. We talked about vulnerable communities. If I have time today, I will talk about the impacts of energy poverty. I will see how I go for time. If we are talking about measures beyond the most vulnerable members of our community, all consumers require some degree of protection because of the nature of electricity production and consumption. At the moment, electricity supply has a very complex web of energy-specific consumer protections sitting around it. As I said, this is an essential service and the nature of electricity supply is that it is a monopolistic industry structure with power disparities between providers and consumers. Energy supply is also inherently extremely dangerous. Electricity is a really dangerous thing to deal with.

Both private sector and state-owned enterprise energy sector participants provided evidence to the standing committee. Perth Energy expressed its concerns about informal, unlicensed or quasi-retail relationships with customers that could emerge. Perth Energy's view was that existing customers dealing with the traditional frameworks are very well protected from market power abuse in particular and have access to financial hardship initiatives, safety and building requirements and things like ombudsman schemes. Perth Energy thought that was very important but it was worried that if microgrid operators, or embedded network operators, were exempted from those provisions or if there were relaxed service standards or conduct that led to consumer exploitation in the absence of appropriate consumer protection framework, it would sully the name of microgrids. Microgrids are a core part of our decarbonisation initiatives. They are a fabulous way to improve network stability and reliability and drive down the cost of the provision of electricity services. The last thing we want is to have some undesirable consumer protection issues emerge that would sully the name of what is otherwise an important part of our emerging energy transition pathway.

The Australian Energy Market Commission did quite a bit of work on this. In 2017, in its final determination on alternatives to grid supplied network services, it noted that customers who moved to off-grid supply should continue to receive appropriate energy-specific consumer protections aligned with those standards that are supplied to customers. It noted that in New South Wales, Tasmania, South Australia and the Australian Capital Territory, customers who moved off grid seemed to lose their energy-specific consumer protections. The AEMC was not happy about that outcome and suggested that when standalone power systems are considered, a range of protections should extend to those customers, including accurate meter reading; regular billing; rights to access energy services and obligations to supply; informed consent requirements; dispute resolution processes; minimum contractual standards; and billing, tariff and payment minimum requirements and protections for vulnerable customers.

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As I said, the Australian Energy Market Commission really thought it was quite reasonable that standalone power system customers—and, I would argue, by extension, any form of microgrid or embedded network customer—should receive the same reliability, security and quality of supply standards as traditional grid-connected customers.

Synergy, the government trading enterprise that holds the retail relationships with south west interconnected system-connected small-use customers, also raised with the committee concerns about customers in embedded networks. It pointed out that these new emerging business model customers might not be eligible for a range of protections that SWIS customers receive, including —

- access to the Energy and Water Ombudsman;
- supply based on regulated standard form contracts;
- supply provided under regulated retail tariffs, fees and charges set by the State Government by reference to a range of social and economic policy drivers;
- access to concessions and the renewable energy buyback scheme;
- coverage afforded under the *Code of Conduct for the Supply of Electricity to Small Use Customers 2016*;
- guaranteed access for life support customers; and
- the obligation for a retailer to supply electricity.

Our concern was that if microgrids were rolled out in the absence of appropriate licensing and consumer protection regimes, it might be very difficult for customers to then secure an alternative electricity supply if they were unhappy with the level of service being provided.

Another concern was that if people had locked themselves into these arrangements for 10 to 15 years and the unit costs of electricity reduced for everybody else over time, they would be disadvantaged. Certainly the state government is very proud to offer the same price for electricity for all SWIS-connected traditional customers right the way across Western Australia, and we were concerned that early movers might find themselves locked into much higher cost arrangements and, therefore, would be disadvantaged over the long term. We found that microgrid operators should be subject to the state's electricity licensing regime and be required to ensure their customers have access to appropriate consumer protections.

Another issue that we spent a bit of time looking at was supplier of last resort—SOLR—obligations. If someone who is connected has an arrangement with a provider and all of a sudden that provider goes bust, somebody should step in and make sure that that person still continues to receive an electricity supply. It should not be the case that through no fault of their own, they do not have access to electricity because of an arrangement with a business. Certainly, that is a material concern when these new business models and new providers might emerge. The supplier of last resort obligations in the south west interconnected system ensures that if there is a failure of a licensed retailer, Synergy will step in to ensure supply continuity. We found that the SOLR obligations are an integral part of electricity supply regimes, and the state government should urgently address the appropriate application of the supplier of last resort provisions to microgrids in the SWIS.

We then looked at the current licensing requirements as they then existed. There were a series of applications from private microgrid proponents to the Minister for Energy for exemption from licensing requirements. They wanted to operate all different forms of microgrids and they were saying that basically their business models did not fit into the way that the current retail licensing categories define services. Exemptions are not new. They have been around for quite some time, but they have usually been made available for very simple commercial arrangements, like onselling and strata buildings. The Public Utilities Office in particular provided us a range of examples of how the existing licensing regime was not suitable for these emerging business models.

The state government in its evidence to us acknowledged the problem. We were worried, however, that the state government might rush to review and allow something to emerge that was just a whole patchwork of exemptions. We did not want to see that. We were worried that there might be very complex and inconsistent retail and licensing arrangements that could lead to inequalities between particular customers even within classes. In existing retail licensing frameworks, there is also quite a strict reporting regime to make sure that people are receiving appropriate customer service and supply arrangements. We were worried that if a haphazard sort of exemptions-based framework emerged, there would not be sufficient resourcing for the oversight of these exemptions and this would get only more difficult over time as the arrangements became more complex and numerous.

There was no evidence to suggest that these new models should be subject to exactly the same regime as the one for big traditional retailers. It also was not clear whether everybody should rise to meet a particular standard or whether the full retail requirements should be relaxed. That was not clear on the evidence that was provided to us. It certainly seemed that some new class of licence may be warranted. The evidence to our inquiry suggested that

suppliers in the south west interconnected system should be required to meet a number of minimum requirements. They included —

- access to the Energy and Water Ombudsman scheme: to provide a dispute resolution mechanism outside of complex contractual mechanisms, that is timely, affordable and easy to access and utilise;
- access to supply based on ERA-approved contracts: to ensure that a minimum ‘safety net’ set of terms and conditions govern supply;

In the bad old days when I worked for the Chamber of Commerce and Industry, I sat on the Economic Regulation Authority’s consumer consultative committee representing small businesses in the design of those ERA-approved contracts. It was really important that, recognising the power disparities between suppliers and consumers, we developed measured and balanced contracts. It is very important that that is a part of the supply to small customers. Further requirements included —

- access to supply provided under regulated tariffs, fees and charges: set by the State Government by reference to a range of social and economic policy drivers, including equity between regional and metropolitan areas and recognising the essential nature of electricity supply;
- access to concessions: to target energy poverty and alleviate hardship;
- coverage afforded under the *Code of Conduct for the Supply of Electricity to Small Use Customers 2018*: to regulate and control the conduct of retailers, distributors and electricity marketing agents and protect the interests of customers who generally have little or no market power;
- guaranteed access for life support customers; and
- the obligation for a retailer to provide a supply of electricity.

They are the core features that we suggested should exist in the new regime. We considered that there was a pretty extensive consultation process required to develop a new licensing framework. Indeed, in 2022, Energy Policy WA made available online a survey seeking feedback, and there was a very strong response to that with 527 residential customers living in various property types, 26 non-residential or business customers and 32 operators or service providers in the embedded networks sector participating. There were a lot of positives, but the survey highlighted several systemic areas of concern and the need for some sort of additional regulation, which is certainly what emerged in the evidence to the inquiry as well.

A quarter of residential customers said that they were satisfied with their embedded network experience and most residential customers in embedded networks reported paying less than the regulated electricity tariffs due to availability of price discounts and solar energy suppliers. One in 10 reported being worse off compared with the regulated A1 electricity tariff rate and four in 10 reported negative experiences in embedded networks. Tenants and strata title and caravan park residents in particular were very critical of embedded network experiences, more so than retirement village residents. The recurring themes were customers not receiving essential information on their electricity supply when they first moved into the property or on their electricity bill. Four in 10 customers did not know the property was even on an embedded network, and six in 10 did not recall receiving basic information on the price they were paying for electricity. Some of the survey comments received were really quite compelling. As an owner-occupier resident in a caravan park said, they never receive a bill, so they have no idea how much they are being charged per unit, whether they are billed for any fixed charges or whether they are being charged fairly.

[Member’s time extended.]

Ms J.J. SHAW: Similarly, an owner-occupier resident in a retirement village reported that they are given very little information on their bills and have to assume that they get no benefit from the solar panels on their roof. Because they get so little information, they have no idea whether they are being charged a fair amount. Another caravan park resident commented that not being advised, either verbally or on their initial site lease, how to access energy concessions has deprived them of a considerable amount of money since they began residing in the park in December 2014. Survey respondents also reported frustrations and barriers in trying to access information and in raising and resolving complaints.

Eighty-three per cent of residents who responded to the customer survey were not informed about who to contact with a question or complaint about their electricity supply when they first moved in. There was also commentary expressing frustration about the lack of accountability and absence of a clear responsibility for who to go to for customer concerns or complaints. There was also no recourse to an independent party to assist with dispute resolution. Tenants expressed feeling very vulnerable and hesitant to raise electricity supply issues with their property manager or landlord for fear of termination of the rental agreement. That would be a truly terrible situation to be in.

For non-residential or business customers in embedded networks, a lot of respondents indicated that they experienced excessive pricing for electricity supplies compared with relevant regulated business tariffs. They had similar businesses to grid-connected properties, but they emphasised that a much higher price was paid for electricity in embedded networks. A tenant in a large shopping centre paid an additional \$10 000 a month compared with similar sites with a direct connection to the electricity grid. Obviously, that is of real concern. Business customers also complained about their inability to access alternative tariff arrangements, such as time-of-use pricing, and very limited negotiation capacity. As I said, those market imbalances are very real.

Residential customers expressed similar concerns about a lack of information transparency, including limited sharing of information when first leasing a property and inadequate billing information. The government took that feedback on board when drafting this bill. The survey certainly helped inform the development of an initial voluntary code for embedded network services, which is the precursor to the development of a mandatory code, subject to the passage of the bill, and a regulatory impact assessment process, confirming the need for additional regulation of this form of electricity supply. That is a core feature of this bill. The other features of the bill include the creation of a registration system that will allow activities to be prescribed as alternative electricity services, and access to the energy ombudsman. That is a really important part of this whole issue. Other features include enforceable protections for energy consumers and ongoing monitoring by the Economic Regulation Authority. That is consistent with the findings and recommendations in the microgrids report.

These reforms will ensure that as new business models emerge, consumers remain protected and safe. They will strike the right balance in ensuring that rights are protected and that an overly onerous and costly regime is avoided. I really want to commend the minister for the progress made towards the recommendations of the microgrids inquiry. That is a real demonstration of this government's ongoing planning and implementation of policy, despite the amnesia that the member for Cottesloe apparently experienced last night when he forgot all about these incredible things that the state government is doing to progress energy system reform. It was not one of his finer moments.

I have a bit of time left. I want to talk about something else referred to in the microgrids report. During the debates that we have had on various aspects of reform, I certainly have not commented—but I think it is very important—on the changes that are underway in the energy system. They are very consumer driven. In a very consumer-centric energy system, we have to recognise that access to a lot of these new technologies is not equitable, and they are not available to all people. Energy poverty is a real issue, one that continues to challenge policymakers. Some consumers are very vulnerable to anticompetitive conduct. As I said, electricity is very dangerous. Not all people have access to these new technologies. It is an essential service; people cannot get by without electricity. As quoted in the microgrids report, the Australian Council of Social Services said —

There is universal agreement that access to reliable and affordable electricity is a basic and essential human right. It is critical to the health, wellbeing, economic participation and social inclusion of all people.

As we go through this process of reform and whilst these structural changes are underway, it is vital that we consider the potential social consequences. As we know, Western Australians, unlike residents in any other jurisdiction, have embraced solar photovoltaic. Access to this technology is far from equal, particularly for people on low incomes or those in rental accommodation. During the inquiry, Synergy observed that owners of distributed energy resources can directly leverage the benefits of virtual power plants and they can have nil variable cost electricity on their rooftops, but people who do not have access to distributed energy resources are precluded from this benefit. It is important to appreciate that.

The other key point to appreciate is that people on lower incomes not only do not have access to DER, but also tend to consume a lot more electricity. They tend to live in less energy efficient and poorer quality housing. Those houses are far more likely to be less insulated. There is also a much higher proportion of housebound occupants in these homes—that is, children, seniors, people with long-term health issues or people living with a disability. People in these households tend to consume more electricity during the day. Whereas more affluent households are able to invest in home improvements and the latest energy-efficient appliances, many people in low-income households have very few options to increase energy efficiency and reduce their consumption costs. We found that access to distributed energy resources and other energy-saving technologies is not equitable. Socio-economically disadvantaged households are less likely to be able to afford distributed energy resources and reside in forms of housing that are less energy efficient. The social impacts of this inequitable access are significant, given that low-income households also tend to consume more energy. It is a really important point that should be front of mind for all policymakers in this space.

The state government set up the household energy efficiency scheme, which aims to look at how we can make households more energy efficient. The Cook government certainly understands the pressures faced by so many households. This is one of the practical steps that we are taking to assist energy consumers. It is also an outcome of our climate policy and an impactful initiative to provide tangible long-term support to provide financial and

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wellbeing outcomes for Western Australians. It is a \$13 million program, funded up to June 2025, to assist up to 10 000 of those low-income households that I spoke about who experience financial hardship. It will help them reduce their energy costs through identifying and supporting the implementation of energy-efficient practices and removing barriers to accessing energy-efficient products. The pilot was launched in November 2021 at Anglicare WA's hardship utility grants scheme service centre. The early outcomes delivered to struggling WA households during the scheme's pilot are real, assisting 167 vulnerable consumers and promising an average bill saving of \$4.80 a day, combined with increased energy literacy to sustain the results. It is important to think about the ways we can do this. Without touching a welfare payment, if we can reduce someone's cost, we can have a considerable impact on easing some of those cost-of-living pressures.

As of 31 July 2023, the scheme has assisted 293 Synergy customers in the south west interconnected system, inclusive of the pilot, through the provision of in-home and virtual audits, energy coaching and community workshops. It is expected that the volume of Synergy customers assisted will rapidly increase from October 2023, with a new team of workers recently on board to help these households with their energy efficiency requirements. Horizon Power is also making necessary arrangements. I worked at Horizon Power. I remember when the transition occurred. Under the Carpenter government, Horizon Power assisted people with household energy efficiency audits. When the Barnett government came in, it got rid of that. It just goes to show how heartless members opposite can be with the attacks they made on vulnerable communities.

I also want to note the Cook Labor government's cost-of-living assistance as part of the 2023–24 state budget. It has committed \$715 million towards cost-of-living relief measures. All Western Australian households are receiving a minimum \$400 household electricity credit this year, split over two equal payments in the July–August and November–December billing cycles. This is important. It has automatically appeared on the accounts of Synergy and Horizon Power customers. RevenueWA is administering arrangements to allow other household electricity customers to receive these payments.

An increased level of assistance is also being provided for those most in need of support with around 350 000 households receiving concessions and eligibility for the Western Australian government energy assistance payment to receive a \$500 electricity credit split over two payments in addition to the regular annual energy assistance payment of \$326. This brings the total support provided to these households to \$826.

I also want to mention the hardship utility grant scheme. The government has announced a 10 per cent increase to payments available under HUGS for customers at risk of disconnection by their retailer of electricity, gas and water services. The payments have been increased to \$640 per eligible household, with a higher payment of \$1 060 available to households located above the twenty-sixth parallel, reflecting the fact that they generally use more electricity. We are continuing to provide tangible and meaningful supports to extend help to those most in need. One thing that we also suggested the Minister for Housing look at—it was also accepted by the government—were opportunities to increase energy efficiency in the installation of distributed energy technologies on public housing buildings. We were very pleased to see that taken up as well.

As I said, this is yet another significant set of reforms undertaken by the Cook Labor government aimed at modernising our energy system and decarbonising our energy economy and making sure that the benefits of that are equitably distributed and that we take care of those most vulnerable members of our community.

MR D.A.E. SCAIFE (Cockburn) [11.32 am]: I rise to make a brief contribution on the Electricity Industry Amendment (Alternative Electricity Services) Bill 2023. It is tough for me to follow member for Swan Hills because she has years of experience and expertise in this area, whereas I am really in the process of educating myself. I wanted to use my brief contribution to reflect on some of the new technologies and emergent alternative electricity services that are popping up around the world and the way that they are popping up in Western Australia or have actually existed in Western Australia for quite some time. We are now learning to leverage and support those technologies and businesses better.

I start by saying that since I was elected, it has become clear to me that Western Australia is a world leader when it comes to technology around standalone power systems, microgrids and uninterruptable power supplies—all of that. That expertise comes from the need to support industries like our resources industry in remote parts of the state with rugged environments and the human capital that we have as a result of those industries and the technical knowledge built up in those industries and amongst our people.

I will digress for a moment because I noticed in the private members' debate yesterday that the member for Cottesloe referred to the Hazer Group pilot plan in my electorate at Woodman Point. I want to say that I very much agree with the comments that the member for Cottesloe made in that debate. I think I toured the Hazer facility in my first year after I was elected and was deeply impressed. I am not an industrial chemist, unlike the member for Cottesloe, but I could see the great promising technology locally produced in partnership with the University of Western Australia. It has been supported by the federal government through the Australian Renewable Energy Agency. It shows great promise to take a by-product—in this case, waste methane gasses from the Woodman Point

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water resource recovery facility—and use it to eventually produce hydrogen. I think it is a really exciting project and I very much agree with what member for Cottesloe had to say in that regard. It is a point of pride for me that it is happening in my electorate at that Water Corporation facility.

I come back to that point about us being experts and world leaders when it comes to things like standalone power supplies and uninterruptible power supplies. I reflect on a business called Magellan Power in Bibra Lake. I visited Magellan Power earlier this year, and I have visited a couple of times now. I was completely impressed by the work done there. It has been operating since 1991. I think it has been manufacturing battery storage technology since something like 2009. Long before it was in vogue and people thought it was going to be a big industry, Magellan Power was already in there. It cannot compete with its storage technology in the current market, but it can compete with boutique uninterruptible power supplies, charging infrastructure and the like to support a variety of developments. Those developments can be power stations—I think it has provided a power station outside Onslow—and it also contracts to our resources industry as well. Its Bibra Lake facility is just bursting at the seams.

It is now under so much demand that it has got to the point at which it is in the process of establishing a facility in Rockingham. I recognise that it received a \$4.4 million grant from the investment attraction fund that the Cook government runs. That funding will help to establish the new facility in Rockingham. It is a really great thing to see us supporting the creation of those advanced manufacturing ecosystem hubs across the state, but I am obviously biased and am particularly glad to see it happening in the southern corridor. I recognise the work that Masoud and Sepehr Abshar have done at Magellan Power, and I am pleased that the government has supported the work they have done there. I think there are opportunities into the future for them to provide charging infrastructure, whether it is privately or via the government, when it comes to decarbonising our transport routes and fleets. I also think there is capacity to further scale up and build the expertise and local manufacturing capability in Western Australia through the work that a business like Magellan Power is doing.

I also acknowledge the work of Australian Flow Batteries. The Minister for Mines and Petroleum visited Australian Flow Batteries and its pilot project in Henderson. It is in the Premier's electorate, but I spiritually claim it as mine. If the draft redistribution goes ahead, it will be in my electorate after that point. It was just really good to see that technology because vanadium redox flow batteries have been developed in different phases around the world, but it is really an Australian technology. It was substantially developed at the University of New South Wales in the 1980s. The difference between vanadium flow batteries and something like lithium iron is that vanadium flow batteries are obviously much bulkier. They are very large and have to carry a large amount of the —

Dr D.J. Honey: Electrolyte.

Mr D.A.E. SCAIFE: — vanadium electrolyte and the various oxidised states that it has to sit in. However, it has a much longer life cycle than lithium ion does. I think it has a 20 year —

Dr D.J. Honey: It is infinite, almost.

Mr D.A.E. SCAIFE: I think that for Australian flow batteries, they put a 20-year life on their product compared with something like seven years for a lithium ion battery. I just wanted to acknowledge that work.

The last thing I want to touch on is an issue that was raised with me in a public hearing yesterday in the inquiry into the domestic gas policy that we are doing through the Economics and Industry Standing Committee. We had the Chamber of Minerals and Energy in for a public hearing. In its submission, the CME said that it thinks that government and industry need to do more to educate the public about the role of gas in the transition. I think the government is doing that, and I put it to the CME that I think it is probably industry that needs to do a little bit more to explain to the public what it is doing and what its role is. It cannot just fall to government to do it.

In all the correspondence that I have with constituents on this issue, particularly people who are concerned about climate change and decarbonisation, I am very clear that if we are going to make the move to renewables—to intermittent power—like solar and wind, it is a straightforward matter that we have to have a source of firming power in the grid. We have essentially three choices for that if we are going to phase out coal: batteries, pumped hydrogen or gas. Of course, we cannot get coal going as quickly as we can get gas going in any event, and we do not really have the topography for pumped hydro, although there may be some pockets where we can do it. That leaves us with batteries and gas. The government is obviously making significant investments in large batteries in Kwinana and Collie, but we are not going to get there through battery storage alone, and that means we are going to need gas. We have an excellent gas industry in Western Australia, and have had for a long time. I am keen to support that industry as part of an orderly transition to a decarbonised economy. My view, which I put to the CME, is that that is the government's position as well. The minister and the Premier have been quite clear about their support for the gas industry. We are obviously facing a forecast gas shortfall later in the decade, and I think that is of concern to every member in this chamber and every public policymaker. Our inquiry is looking into that, but, without pre-empting anything, I look forward to the government, in a bipartisan way with the opposition, hopefully bringing forward measures that will ensure that the shortfall that is forecast at the moment does not come to be, because obviously the consequences of it would be considerable for residents and also for industry.

Extract from Hansard

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On that note, I conclude my comments and thank the minister and commend the bill to the house.

DR D.J. HONEY (Cottesloe) [11.41 am]: My contribution today on the Electricity Industry Amendment (Alternative Electricity Services) Bill 2023 will be brief. I made my substantive comments about the general issues on this topic during debate on the Electricity Industry Amendment (Distributed Energy Resources) Bill 2023 and private members' business yesterday. I want to reflect on a couple of comments made previously. Firstly, I enjoyed the contribution by the member for Swan Hills, but gratuitous personal insults do not add to the quality of her debate or her reputation.

Mr W.J. Johnston: Unless it comes from him.

Dr D.J. HONEY: The minister will note that I do not engage in that.

Withdrawal of Remark

Ms J.J. SHAW: I was just verbally. I did not make any personal insults whatsoever against the member for Cottesloe. I merely commented on the amnesia he demonstrated about policy developments during the debate in the chamber yesterday. I take offence and I would ask him to withdraw the statement.

The ACTING SPEAKER (Mrs L.A. Munday): Member for Swan Hills, it is not a point of order. Member for Cottesloe, I ask you to be a little kinder with your conversation, please.

Debate Resumed

Dr D.J. HONEY: Thank you very much, Acting Speaker. I would recommend that to both the Minister for Energy and the member for Swan Hills in their contributions in this place; it does not add to the reputation of either, unfortunately, because they are both talented individuals.

I will reflect on the comments made by the member for Cockburn about the Hazer process. I want to dwell on that. One of the big problems that I discussed yesterday during private members' business is that one of the challenges for our energy system is the whole issue of the backup that is required for intermittent power. Unless something else is developed, gas is going to be that critical backup for the foreseeable future. The Hazer process and the ability to produce hydrogen with an almost zero carbon footprint is really impressive, if its costs are even close. I was looking at the costs it quoted and did some basic calculations. Using its hydrogen at the prices it has quoted, a Toyota Mirai would be cheaper to run than an equivalent hybrid—that is, a mixed petrol–electric vehicle—and cheaper to run than a diesel vehicle. That is a really impressive opportunity. If its costs come out even close to what it is saying, it would really be a game changer. Although it is using a by-product at that plant, its potential for use as the mainstream way of using natural gas in the future and almost eliminating a carbon footprint from that is really quite remarkable. It is really impressive and I am excited to see how that will manifest in the future.

The bill clearly outlines that it will amend the Electricity Industry Act 2004 to implement the alternative electricity services regulations. I note at the outset that the opposition believes that this is needed and important legislation; thus, we support the legislation. One of the comments the minister made yesterday was about the regulatory framework in Western Australia. I think collectively—the minister may choose to say that he takes the credit for the regulatory framework that we have developed over time—our capacity-regulated market makes us the benchmark in Australia, and this bill will introduce further important regulatory change. The legislation is an enabler for the AES registration framework and the subsequent regulations, which will obviously contain the bulk of the detail, so we will see that in the future.

Our energy system is becoming dramatically more complex, and that is leading to a range of issues that need to be resolved. One of the interesting things to come out of the renewables industry is that standalone systems are becoming feasible for relatively low intensity energy users. In particular, I note that some property developers, such as Hesperia, are exemplars of this. It is doing some excellent work to ensure that in group dwellings, the benefits of renewable energy go to all the people who occupy the dwellings. In particular, it is making sure that it maximises the renewable energy resources to ensure that the people who occupy those buildings can minimise their energy costs and their energy footprint, and, of course, this legislation will assist in that.

It is also interesting that it is becoming realistic for low-intensity energy users to go off the grid. At the moment, battery storage is not sufficient, but I think we will possibly see improved technology developed. I share the member for Cockburn's enthusiasm for flow batteries. Flow batteries are very good, particularly for fixed storage, but not for mobile storage. Just to add to the background on flow batteries, Murdoch University—this is going back probably three decades—had an outstanding group of electrochemists under Professor Ritchie, but there was also a researcher called Dr Pritam Singh, who did some excellent work with zinc–bromine batteries. Their research was really groundbreaking. If we go back further, in its day—back in the 1970s—the old Western Australian Institute of Technology was probably the world leader in renewable energy. It was really the benchmark. I think it should be an aspiration of this government and future governments for us to re-establish our pre-eminence in the research and development area. We have become users of technology. As was pointed out, some good work has been done; the Hazer process was based on local technology. I do not think we should surrender that ground. We should be trying

to get back into that space. One of the things that I hope comes out of this energy transition is that we put much more focus on research and development. The unfortunate reality is that the universities have fewer relevant experts now than when I went to university. If anyone looks at my CV, they will see that I started university in 1976. There has been a substantial degradation of the research capacity of universities, particularly in the physical sciences, and it is a real tragedy. I am really hopeful, rather than optimistic, that the dominance of renewables in the Western Australian energy market will lead to a re-establishment of that expertise at our universities.

Getting back to the legislation at hand, there has been a lack of transparency for energy customers who rely on their landlord to allocate the fees and charges incurred to the principal energy provider, which in our case is usually Synergy or Horizon Power. I think the member for Swan Hills did a good job in outlining the challenges that customers face and the lack of transparency. I think all of us have heard complaints from tenants about being mistreated or, in fact, substantially overcharged for the service they were provided, and that there has been no transparency. Obviously, this legislation will enable that transparency to occur. It will provide a regulated framework to ensure that customers are supplied in a way that protects their safety, which is obviously the most important thing, and treated in a fair and transparent way. There will also be a defined path to resolve disputes and complaints. Of course, that means that the regulations will not just simply exist but also be enforceable.

The threshold for the application of this legislation is at a reasonable scale. It defines small users as those who use up to 160 megawatt hours. Just as a point of interest, I wondered what that really relates to in terms of magnitude. An average household in WA consumes only about five megawatt hours, so we are talking about a very large energy supply. I was interested in that because this will apply at a fair scale.

I again note for the Minister for Energy that the handling of this bill follows the same form as the Electricity Industry Amendment (Distributed Energy Resources) Bill 2023, in that the explanatory memorandum is exemplary and a good template for colleagues to follow. It is obviously very thorough and easy to follow. One reason my contribution will be brief is that the explanatory memorandum goes through and explains why this is good and important legislation. I do not see any need to repeat that. This is sensible and important legislation. As such, I commend the bill to the house.

MR C.J. TALLENTIRE (Thornlie) [11.52 am]: I am very pleased to rise to speak to the Electricity Industry Amendment (Alternative Electricity Services) Bill 2023 because it has great relevance to constituents in my electorate who live in retirement villages. It is also of great interest to people who are contemplating moving into apartments in which the body corporate is involved in this and to people who live in long-stay residential parks similar to retirement villages, such as accommodation designed for the over-55s. This is also very relevant to people in commercial premises, especially in small and large shopping centres.

I will dwell a little on the situation for people who live in the Arcadia Waters retirement village in Maddington in my electorate. The Arcadia Waters complex is home to around 280 individual units with, say, around 500 people. Those people are very proud of the fact that they have had solar panels at that complex for a long time. Indeed, Arcadia Waters is to be commended for its vision in being at the forefront of the installation of rooftop solar photovoltaic panels. The residents were very enthusiastic, especially when it was all new, about contributing to the development of renewable energy and reducing their overall emissions. They embraced that wholeheartedly. However, as time has gone on—my recollection is that the panels were installed at Arcadia Waters as far back as 10 years ago—people have perhaps lost that connection with the rooftop solar panels and their own electricity consumption. Why is that? I think it is because they have not been able to see their individual bills and the amount of electricity that has been generated from those PV panels, or the difference it makes when one is a little more energy efficient and energy wise. They have not had full sight of how that has been beneficial to the overall consumption of electricity at Arcadia Waters. That is because people are billed behind a meter. A lot of rounding seems to go on. It has not been very clear how an embedded network supply arrangement can ensure that individual units know exactly how much electricity they are consuming and, at the same time, can relate that to the electricity production that is happening at the retirement village.

This legislation will go a long way towards solving that disconnect by helping people to see their arrangements. That is particularly important when it comes to the tariff arrangement that they choose. This is all very easy for those of us who live in standalone dwellings—the typical suburban house—with rooftop solar units. Such people can see on their Synergy bill how much electricity they have exported and imported. They can then weigh up whether it is advantageous for them to be on the A1 tariff system or should think about switching to a smart meter. That is the thing that people often weigh up. Sometimes, people are a bit disappointed because they made the wrong choice, but they can always correct it. However, they need to have full sight of this information so that they can make that decision. I know that for my household it is definitely better to be on a smart meter. This means that I pay quite a bit more for any electricity that I consume at peak time, but that works well for me because I do not consume as much at that time. It is quite a difference in pricing. For my arrangement, I buy 100 per cent natural power, so I pay a premium for that. I am very happy about that as that is a way for me to contribute to some of the large-scale renewable energy systems that we have across the south west interconnected system. However, when

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I import electricity at a peak rate, I pay 53.26¢ a unit, so I am naturally keen to not put on my washing machine during peak time. I need to double-check when that peak time is, minister!

Mr W.J. Johnston: It is 6.00 to 9.00 pm.

Mr C.J. TALLENTIRE: It is 6.00 to 9.00 pm; okay. Sometimes convenience gets the better of me and I make the mistake of putting it on at that time, but I shall remember.

Mr D.A. Templeman: Wash your smalls at a different time.

Mr C.J. TALLENTIRE: Yes; it is very important to have all the washing done at the lower off-peak rate, which is 14.67¢. Clearly, there is an advantage. The point is that I get the benefit of that knowledge because I get the bill with all the information, and I commend Synergy for providing such a detailed document because it is very helpful, and it helps me make the decision. However, I know that for retired people who are living at home and consume a lot of electricity during the day, it is perhaps better for them to sign up to the A1 tariff. They can make that choice, especially if they have rooftop solar because they consume electricity during the day. If they have a swimming pool or use washing machines and other things, it is probably best that they use their discretionary choice and consume most of their electricity during the day when their rooftop solar is working at its optimum and they can get the benefit of that straightaway; otherwise, they will end up paying 24¢ a kilowatt hour. That is the line of sight we want to give people who live in retirement villages or bodies corporate. Currently, they are behind the meter and do not get the same quality of billing information. In some cases, the justification for the price they are paying is quite vague, which kills any sense of people wanting to become more energy efficient. It dissuades them from bothering to invest in whitegoods of one more form or another that are more energy efficient. They just think they will be charged a flat rate that they are stuck with and that they will not get the benefit of the incentives that come when people can see the figures. That is one area that I think is very interesting.

I now want to talk about the issue of strata complexes, which I think is a fast-evolving issue. At the moment, if a person buys an electric vehicle and lives in a strata complex, it is probably not hard for them to talk to the body corporate and say they need a power point located close to the parking bay so that they can easily charge the vehicle. When one or two people make that request, it seems to be fairly straightforward and not particularly costly for the body corporate to provide the resident with the power point without any problems at all. However, the situation that is coming upon us very fast is that when many people in a complex—indeed, the majority—want to charge their electric vehicle in their parking bay, understandably, suddenly there is advice that the technical reality is that the electric system in the complex cannot cope with that many power points and a big upgrade of the building's electrics is needed. The body corporate must then decide whether to embrace the cost and share it across all the residents in the complex. This is important. It will become more interesting as we head to what I think is a fascinating situation of each electric vehicle being looked upon as not just a clean and efficient means of getting around, but also as a mobile electric storage point. We want bodies corporate to install and upgrade their electric systems so that the vehicles cannot only take electricity from the grid to charge, but also enable —

Mr W.J. Johnston: Are you listening to this, Acting Speaker?

The ACTING SPEAKER (Ms M.M. Quirk): I certainly am, and I am very constrained that I cannot agree heartily with what the member is saying.

Mr C.J. TALLENTIRE: Perhaps the Acting Speaker will be able to make a contribution and we will hear about her lived experience on this.

It is very exciting that people could use their electric vehicles to become exporters to the grid when their car is fully charged, they have an app that is no doubt connected to Synergy or whoever their electricity supplier is and they can see the market rate at which they can sell the electricity. That will be a particularly fluid situation. Electricity will be traded and moved around to the highest bidder at any point in time. I find that very interesting. I notice that the member for Cottesloe has a strong interest in this area. He mentioned people who choose to go off grid. My inclination would be to counsel people against going off grid because if they do that, they will lose that capacity in time—no doubt they could re-sign up—to see the grid as an opportunity to take electricity at the moment but to be able, in the future, to sell it back to the grid at peak times and, therefore, make a little profit on it. At the moment, of course, there are various feed-in tariff rates. I understand why they are set where they are, but it is perhaps not enough to motivate people to be in the business of selling. However, I think in time we will see things evolve to that point of sophistication at which people who have excess electricity will have the capacity to sell at the peak rate. That level of sophistication and fluidity can be accessed only through having that level of grid access. I think that is a very interesting point.

I want to talk a little bit now about the bigger consumers of electricity. I refer to those who consume around 50 megawatts per annum, which equates to, I believe, well over \$15 000 of electricity per annum. We are talking about pretty sizeable businesses that consume that amount. I think the typical household—this comment has been made—is probably more like five megawatts per annum. If people consume in the 50-megawatt range, they are

a contestable consumer. In other words, they can choose not to go to Synergy and choose another electricity supplier. That should mean that they can negotiate and enter into competitive contracts and get electricity at a cheaper unit price. However, it seems that some people in small and large shopping centres and commercial premises do not have that visibility. The electricity is bulk purchased and they are behind the meter. Instead of them being able to go into the market and choose the most attractive supply arrangements, they end up paying more for their electricity. They do not get the benefit of the contestability. That is an unfortunate situation. Again, that will be remedied by this legislation. That is really interesting to see and is really important.

I have already talked a little about energy efficiency. I think there has been a tendency to think of people who live in units in retirement villages or long-stay tenancy parks or what have you as being pretty low-level consumers overall. Individually, it is true that they are. However, as we know, when it is multiplied out, collectively, it is quite a significant sector of the market. To be able to provide them with energy-efficient options will have a big benefit not only to them as individuals, but also on the overall demand on the grid, especially at peak times. As a government, the Cook government is very aware of the need to help people with electricity pricing. Some tremendous work is being done around the various electricity grants that we have been giving people, such as the \$400 household electricity credit. I know how much they are appreciated. I have very positive feedback from constituents about that; they really appreciate it. I also recognise that around 350 000 households that are most in need are receiving concessions. They are eligible for the WA government energy assistance payment, so they receive a \$500 household electricity credit split over two payments. It is another very important and sensible arrangement that shows we are a very thoughtful and caring government. As I say, I have received very appreciative feedback about that.

[Member's time extended.]

Mr C.J. TALLENTIRE: The issue of a voluntary code for embedded networks is an important way we are looking to proceed. I think it will be embraced by the organisations that I have mentioned, such as Arcadia Waters and all those bodies corporate around the place. I think that some very interesting discussions will be had at various meetings for people who live in strata complexes, and we will see a big uptake in participation and discussions around these things. It leads me to consider how we need to ensure that the quality of strata management is consistent. I know of excellent strata property managers and members of Strata Community Association WA, in particular, who really uphold the highest of standards. I know that some strata companies are somewhat dismissive of complaints and queries from residents, and can be absolutely impossible to contact by people in neighbouring properties. We have to work on putting an obligation on strata managers to be accessible to the residents who live in a strata complex and be equally open to communications from people in neighbouring properties. People who live in standard dwellings can contact their neighbours to discuss issues such as a tree overhanging a solar panel or whatever. That sort of good neighbourly contact is part of our way of life, but my feedback is that some strata managers are highly dismissive of people who want to see some level of improvement or assist in some level of good neighbourliness and are not open to hearing it. This is admittedly something to be looked at under separate legislation, but it is an important consideration.

I also note the recommendation that consumers receiving services should have access to the energy ombudsman. If somebody receiving services feels that there is some inconsistency in their behind-the-meter information or if there is some reason for complaint, they should be able to talk to the energy ombudsman. That seems very important. The code of conduct for the supply of electricity to small-use customers, with all the necessary safeguards in place, is an important development as well.

I see we are also ensuring the improvement of our hardship utility grant scheme payment system—something the Barnett government seriously neglected and made almost impossible for people to access—by increasing the hardship utility grant scheme to \$640 a eligible household. There is a higher payment of \$1 060 for households in the northern parts of the state, which for the most part would be Horizon Power consumers. It is really heartening to see legislation coming into this place that helps people who might not realise that the work that goes on here is directly relevant to them. People in Arcadia Waters and Maddington, who are very happy in their residential retirement village, have in some ways almost forgotten how good and valuable their photovoltaic panels are in reducing the overall cost of electricity at their village. Through this legislation, I think they will get more of a connection and see the levels being consumed in quite a detailed fashion. They will then be able to see that it is advantageous for them to, indeed, lobby for perhaps even more rooftop solar. It is fascinating; I know.

I have heard from the Minister for Energy on numerous occasions that the collective pool of rooftop solar is the biggest supply of electricity on our south west interconnected system. Western Australians have certainly embraced rooftop solar, and I think that is highly commendable and shows how open we are to new technologies. In time, I think we will see the same with battery storage and in the future with microgrids, in which these community-level or retirement village operations have their own battery storage capability. Again, people will want to see how much there is on store and what price they can perhaps draw down on. That will be a very good way to proceed. People often ask me, “Should I buy a battery today to store electricity at my home?” I am inclined to say to people,

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“I’m not sure that the pricing is there,” but it is wonderful to have people motivated to be early adopters; that is great. Community storage, which is at a smaller scale, and the various trials around the network on this are giving great results and showing how we can manage things as effectively as possible. That is really important and exciting.

The whole renewable area captures the imagination, and I commend the member for South Perth and his leadership in the Parliamentary Friends for Clean Energy. It is always inspiring to hear about new windfarm developments, offshore windfarm developments and discussions around the potential for pumped hydro in WA. This area may be an opportunity to learn about other renewable energy options, such as some of the geothermal capacity that we have, as well. There are all sorts of opportunities that can be done in an emission-free way, which means that we can then go about meeting the various commitments made as a nation and state to achieving our emission-reduction targets. This important legislation will help consumers at the hip pocket level but also relates directly to the overall emission reduction target of the nation and, indeed, the world. When there are discussions at COP28 in Dubai in a few weeks, the Australian delegation and associated people to that delegation will be able to talk about initiatives like this as examples of how we are delivering and pushing every possible angle to achieve the emission reduction target that, as a global community, we have to achieve.

I know it can seem quite abstract for constituents of mine living in a retirement village, but this all relates to the general global direction of making electricity consumption something that people can monitor and respond to. I think the level of what we could call environmental literacy or energy literacy is really quite striking; people understand what it means to be consuming electricity and that flicking a switch and putting on a gadget or a device could burn 2 000 watts of electricity, for instance. People have a sense of how much energy is being consumed. That is an important development because I think 20 years ago people were pretty blind to what the consequences of an electric motor or a device might be. Now we have that level of literacy in the community, and this legislation will help to further develop that. It means that people will get the information they need. They will not just be given a round figure because they are behind the meter.

I commend this legislation and look forward to having discussions with people when they come in and see me with their behind-the-meter electricity bills; I will be happy to discuss with them their opportunities for reducing energy use and being more energy efficient still, and what ways they can perhaps lobby their body corporate to improve their circumstances. I commend the bill to the house.

MR G. BAKER (South Perth) [12.21 pm]: I rise to speak on the Electricity Industry Amendment (Alternative Electricity Services) Bill 2023. This bill is part of a large energy transition that is underway in Western Australia. Yesterday, we had a debate in here about energy. We heard quite a bit of a doom and gloom from the opposition about this transition. As we heard from the government side, a very optimistic story in this area is being ignored by the opposition. It is the realm of opportunity and innovation, and our economic future that is at stake here. This bill is just one part of that program of reform by the WA government.

I wanted to grab the opportunity in this debate to talk about the transition that is underway and the various components of it, and to report back on some of the things that the Parliamentary Friends for Clean Energy have been up to this year and some of the discussions that we have had. The Parliamentary Friends for Clean Energy is a group convened by four MPs. I will talk more about that later, but our reason for being is to encourage discussion about the clean energy future in this Parliament. We have had a number of events this year. I will give members a quick run-down of those events and some of the discussions that we had there.

In March, we had Horizon Power talk to us about its clean energy projects in Denham and Onslow. I thank Renato Pascucci, the project manager from Horizon Power, for the Denham hydrogen demonstration plant, and Phil Western, the senior manager of emerging energy technologies, who talked to us about the Onslow distributed energy resources management system. These two projects are really quite incredible. Horizon really grabbed the opportunity with its small power grids that it runs throughout Western Australia to experiment with new energy solutions. The Onslow distributed energy resources management system is an attempt to come to terms with rooftop solar flooding small systems with power. Horizon Power has installed fairly large batteries in Onslow and has a power management system managing that town so that it can switch between batteries and other sources of energy through the day. It really is a groundbreaking system. It is not the technology that is groundbreaking. It is actually the control systems that Horizon is instituting across the town.

The second project the representatives of Horizon talked about was the Denham hydrogen demonstration plant, which is a really cool project. We are now producing hydrogen on a very small scale in a small country town. The hydrogen firms the power to bolster the current array of diesel, solar and wind that is being used in the town. We have a fourth power source. Horizon is using that as a demonstration project to find out how applicable hydrogen is. Once again, it is not using any groundbreaking technology per se. All the components are off the shelf. They have all been put in sea containers so they are nice and safe and durable during the extremes of weather. The key part is that they are developing the control systems so that the solar, the different components of the hydrogen electrolysis and the power production itself are all being done through an automated system that it is developing.

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Horizon is making this system available to other providers as well. We are making a really great contribution to the development of hydrogen power around the world.

In May, we heard from the Electric Mine Consortium, and we heard about decarbonising in the mining industry. We heard from Graeme Stanway from State of Play, but we also had people from Bellevue Gold, South32 and Zenith Energy come in. The great thing is that the Electric Mine Consortium is not just thinking about how can it convert all those diesel generators and diesel vehicles into electric vehicles, but also looking at enormous safety improvements on site. I was rather surprised by this—that the amount of diesel that we are using in underground mines requires an enormous amount of airflow to keep the air safe and remove diesel particulates.

Mr W.J. Johnston: Actually, the largest part of the energy consumption in most underground mines is the ventilation to remove the diesel fuels, so if you eliminate the diesel fuels, you eliminate the need for the energy use and cut costs.

Mr G. BAKER: It is such a simplification of the process.

Mr W.J. Johnston: Correct.

Mr G. BAKER: I thank the minister for the interjection. It is an enormous simplification and cost saving, and all those mining companies look at the amount of diesel that they import and have to get out to the sites and are looking for ways to save money on that. They look at the sunlight that is falling on the ground around them and ask: how can we find a way of using that instead of bringing diesel from the other side of the world? The old engineers are beginning to think about the health implications a lot more. It is a great win-win-win as these mines adopt electrification. In August, we heard from Copenhagen Infrastructure Partners, particularly Matt Gill, the company's commercial director. He spoke to us about the Star of the South project, which is happening in Bass Strait. Copenhagen Infrastructure has a proposal and is doing a lot of development work on a plan for a very large scale offshore wind project. Offshore wind is probably going to be the third cheapest source of power in the future, with large-scale solar being the cheapest, onshore wind being the second cheapest and offshore wind being the third cheapest kind of power; then gas, coal and nuclear are all further down the chart from there.

In Bass Strait, I think, it is looking at least 10 kilometres offshore but might be up to 50 kilometres offshore, in water that is between 20 and 50 metres deep, and installing turbines that are fixed to the floor of the ocean. The advantage of having it in the particular area of Bass Strait is that it is not too far from the existing transmission lines and the old coal-fired power stations that are in Gippsland, so there is an easy connection to the east coast grid.

The other advantages of offshore wind include a really steady power production and a really steady wind flow generally. It is a complementary pattern of power to solar. Generally, wind is slightly stronger in the evening than during the day. That means that our solar energy, which is strongest during the day, can be complemented by stronger winds in the evenings, so we can balance out that power profile.

One of the things I had not quite put together was how much infrastructure and manufacturing is required for a large-scale offshore wind facility. If it was done in Western Australia, we would be looking at fairly large port developments, either in Bunbury, Fremantle or Cockburn Sound. It would need ongoing maintenance and would be a significant employer over a very long period.

It was great to hear about Copenhagen Infrastructure Partners' environmental record and the kinds of environmental sensitivity that it is including in its development proposals. I have heard some weird debates in east coast communities lately. Certain Sky News commentators are blowing up environmental concerns that are not based on reality. It is very odd to see those debates taking off and getting traction when they are not based on any science.

In October, we heard from Nicole Roocke, the CEO of the Minerals Research Institute of Western Australia. She spoke about using green steel in a domestic hydrogen industry to decarbonise the steel industry, particularly looking at smelting iron ore as part of the worldwide value chain of accessing other types of iron ore deposits in Western Australia such as hematite and magnetite. May I interrupt the Minister for Mines for a second?

Mr W.J. Johnston: It works best with magnetite.

Mr G. BAKER: I thank the minister. Magnetite is the mineral that can be used to develop large industry and be used to find other ways of smelting, thereby providing a much broader range of industries for the iron ore industry, instead of just hematite.

Dr D.J. Honey: Magnetite is actually also the larger long-term source of iron ore, so there is more magnetite than there is hematite.

Mr G. BAKER: So the Pilbara blend that Rio Tinto is mining consists of hematite.

Dr D.J. Honey: Yes. It is hematite.

The ACTING SPEAKER (Ms M.M. Quirk): Member, you invited the interjection but it is not a dinner party conversation. Just keep to the script, please.

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Mr G. BAKER: I welcomed the interjection. It was a contribution—a positive one.

The important part of this is that it would bring the smelting process close to where the energy will be available. Instead of exporting iron ore from Western Australia to somewhere in East Asia and also exporting the energy from Western Australia to somewhere in East Asia, we could carry out the energy-intensive parts of the smelting process in Western Australia using the cheap energy available here. There is a logic to that that needs to be understood and developed.

In October, Hon Dr Brad Pettitt, member for South Metropolitan Region, and I looked at the vanadium flow batteries produced by AFB SolarWing down at Henderson. There are a number of different solutions. We saw a 100-kilowatt power system that fitted into two sea containers. It looks like a viable energy supply option for small or medium mine sites or even small towns. It is a very simple solution that provides a very cheap, long-term power supply. As we discussed earlier, vanadium batteries have the advantage that the electrolyte in the battery will last longer than the container of the battery itself, resulting in very long duration batteries. That was very exciting.

In November, Mark Rheinlander and Lucas Pickering from Carbon280 came to talk to us about some advances in hydrogen storage and transport. We currently have very large agreements with Japan and Korea. There is enormous potential for a hydrogen industry in Western Australia. However, we have these small technical challenges. The volume of hydrogen that we would need to export is enormous. As a gas, it would take up way too much space. As a liquid, it requires some quite extraordinary cooling—I think it is minus 250 degrees—and needs to be transported in that state. Natural gas is exported at a temperature of about minus 150 degrees so to get to minus 250 degrees is a very significant extension. That is one possible way of exporting hydrogen. Another possible way of exporting hydrogen is as ammonia, which has a fairly difficult safety profile to manage. Ammonia does not burn very cleanly. We still have problems to solve with either super-cooled hydrogen or ammonia.

Carbon280 has developed a process using a material that absorbs plenty of hydrogen. It is a very simple injection process and a very simple removal process. The energy density is very high. The goo into which the hydrogen is put is fairly straightforward. It is non-toxic and behaves a lot like a viscous oil. The technology to move it around is fairly straightforward. We would be able to fill tankers with hydrogen in Australia, take them to other countries, remove the hydrogen from the tankers and bring them back again and use the same material over and over. It is a great simplification of the process and has the potential to unlock the cheap energy that we have in Western Australia and make it exportable. It was really exciting to hear about that process. The representatives from Carbon280 even brought some goo into Parliament. We were sitting in the small meeting room looking at this goo. It was all very simple and straightforward. It would be really exciting to see whether we can get that off the ground.

I thank the co-convenors from the Parliamentary Friends of Clean Energy; Christine Tonkin, MLA, member for Churchlands; Hon Dr Steve Thomas, MLC, member for South West Region; and Hon Dr Brad Pettitt, MLC, member for South Metropolitan Region. We have had a lot of very interesting discussions. We do not all agree on everything, but we are all looking forward to this future happening. I would also like to thank the Minister for Energy, Bill Johnston, and his staff for assisting us during the year and providing us with contacts and information, and a number of regulars who attended our session, including Jess Shaw, Darren West, Chris Tallentire, Dan Caddy —

The ACTING SPEAKER: Member, strictly speaking, you should refer to members by their electorates.

Mr G. BAKER: I thank the Parliamentary Secretary to the Premier, the member for Swan Hills.

The ACTING SPEAKER: Excellent.

Mr G. BAKER: I also thank Hon Darren West, member for Agricultural Region; Chris Tallentire, member for Thornlie; Hon Dan Caddy, member for North Metropolitan Region; and Hon Dave Kelly, member for Bassendean. Other attendees included the Leader of the Opposition, Shane Love; Divina D’Anna, member for Kimberley; Robyn Clarke, member for Murray–Wellington; Kevin Michel, the member for Pilbara; and Lara Dalton, member for Geraldton. Their interest goes to show the level of importance that this energy transition has for the regions in Western Australia. These clean energy projects will unlock an enormous economic potential.

My very quick conclusions from this year’s sessions are that solar and wind power will be the cheapest sources of energy going forward. They will be cheaper and cleaner than anything else we can get. Technology is evolving very quickly. If I hear someone say, “That’ll never happen”, invariably, a couple of weeks later, I will be talking to someone who says, “Yes, we’ve got one of those working out the back. Do you want to come and see it?” Western Australia will be among the cheapest energy providers in the world and will be the closest to South-East Asia. These three things amount to an enormous economic opportunity that is potentially on the same scale as our mining booms that we have experienced in the past. The government has a crucial role to play to create a regulatory framework that will unlock this potential. The Electricity Industry Amendment (Alternative Electricity Services) Bill 2023 and other bills that we have discussed this year such as the Electricity Industry Amendment (Distributed Energy Resources) Bill 2023 and the Land and Public Works Legislation Amendment Bill 2022, and things like

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the distributed energy resources road map, which was developed in 2020, the WA electric vehicle network, our international clean energy agreements with Japan and Korea, the development of the lithium industry and the emergence of critical minerals, mean that we are extremely well placed to not only benefit Western Australia, but also be of assistance to the whole world in transiting to clean energy.

The Electricity Industry Amendment (Alternative Electricity Services) Bill 2023 is one way to unlock the potential of that clean energy transformation. I am really excited to see how it will be embraced by the community and by industry. I commend the bill to the house.

Visitor — Evelyn Wheeler

The ACTING SPEAKER (Ms M.M. Quirk): I welcome to the Speaker's gallery Mrs Evelyn Wheeler, who is a guest of the member for Warren–Blackwood.

Debate Resumed

MS C.M. ROWE (Belmont) [12.41 pm]: I rise to make some brief comments about the Electricity Industry Amendment (Alternative Electricity Services) Bill 2023. I take the opportunity to congratulate the Minister for Energy for bringing yet another piece of legislation to this house that, as a consequence, will be incredibly supportive of people who often do not have a lot of autonomy in their lives. I am speaking about how this bill relates to people who live in apartments and caravan parks, both of which I have in my community of Belmont. I have people who use a caravan park as their long-term place of residence and also a lot of people who live in apartments. This electricity industry amendment bill obviously deals with electricity, but I want to talk about how it will impact people in my community and also some of the other things that the minister has done in the energy sector to assist low-income earners.

This morning I made a grievance to the Minister for Housing about the fact that nearly 43 per cent of residents in my electorate are renters and that on a daily basis I have constituents see me who are really struggling with the cost of living at the moment. In fact, one of the mums at the school that my children go to has had to move back to Queensland because she was in a private rental and the weekly rent was going up by some insane amount. She could not find anywhere else to go, so she was forced to move back to Queensland to be with family. It is an issue for a lot of people across the state, but certainly in my electorate. I am very aware of how the cost of living impacts on my community. I want to talk to that and about some of the things that the minister is doing to help people who might already be struggling to meet cost-of-living expenses—especially with a rent increase—through helping with power bills and the like.

I go back to the bill that we are here to talk about today. Other members, particularly the member for Swan Hills, have already talked about how this bill will impact on embedded network supply arrangements, but I, too, want to touch on that. A survey was done to find out the experience of those people who live in retirement villages, apartments and long-stay residential parks. Respondents to that survey included 527 residential customers who lived in various types of accommodation, as I mentioned before—long-stay residential parks, retirement villages and the like. Some of the feedback in the survey spoke to pretty much a systemic issue or level of concern that people experienced. One in 10 of the residential customers who participated in the survey spoke about being worse off. They felt that they were pretty much left in the dark a lot of the time and did not feel as though they were empowered enough to query power costs because their living situation was precarious and to query the costs could potentially put them in jeopardy of being evicted and so forth. They did not feel like they had autonomy over the electricity bills for their property. The respondents felt it was very difficult to obtain basic information about the price that they were paying for their electricity. One owner–occupier in a caravan park mentioned in their survey response —

“As I never received a bill, I have no idea how much per unit I’m being charged or if there are any fixed charges that I’m being billed for, or if I’m being charged fairly.”

That is a basic right that should be provided to people who live in caravan parks, or anywhere for that matter. Anyone who pays a bill should be furnished with information about those charges and they should be fully transparent. Another retirement village resident commented in their survey response —

We are given very little information on our bills and have to assume that we get no benefit from the solar panels on our roof. Because we get so little information we have no idea if we are being charged a fair amount.

That illustrates the point quite clearly that those people feel particularly vulnerable. I have had many conversations with people from the caravan park in Ascot who have found themselves living there because of difficulties that they might have experienced in their life. They are already potentially feeling vulnerable and on low incomes and they want to know that if there is to be a reduction in their electricity bill, it will be fairly attributed.

Extract from *Hansard*

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Ms Jessica Shaw; Mr David Scaife; Dr David Honey; Mr Chris Tallentire; Mr Geoff Baker; Ms Cassandra Rowe

It was really important that that survey was undertaken and it speaks to the commitment of not only the Labor government, but also our minister in making sure that those who are most vulnerable in our community are always protected and looked after. That is most clear in how the minister handled the household energy efficiency scheme. I want to touch on that because it has certainly been most impactful for people right across my community. I am really proud that our minister has taken it upon himself to ensure that that scheme is rolled out and I will highlight what it involves. The household energy efficiency scheme—is it pronounced HEES?

Mr W.J. Johnston: Yes. It is changing its name.

Ms C.M. ROWE: Yes; it is quite a strange one. HEES is an outcome of the Western Australian climate change policy. It is an impactful initiative to provide tangible, long-term support to improve financial and wellbeing outcomes for Western Australians. That is its intent, and I certainly think that that is what is going to be achieved. It is a \$13 million program that will be funded to June 2025 and it aims to assist 10 000 low-income households experiencing financial hardship. It will assist eligible households to reduce their energy costs through identifying and supporting the implementation of energy-efficient practices and removing barriers to accessing energy-efficient products.

In 2021, household energy efficiency scheme pilots were launched at Anglicare WA's hardship utility grant scheme service centre and the early outcomes delivered to struggling Western Australian households during these pilots show that it has assisted.

Debate interrupted, pursuant to standing orders.

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