RENEWABLE ENERGY — VALUE CHAIN

Grievance

MS J.J. SHAW (Swan Hills — Parliamentary Secretary) [9.46 am]: My grievance is to the Minister for Energy and relates to the implementation of the recommendations made in the fortieth Parliament's Economics and Industry Standing Committee's inquiry that produced the report titled *Taking charge: Western Australia's transition to a distributed energy future* that I was privileged to chair. The inquiry considered the significant changes underway in Western Australia's energy industry, following the unprecedented take-up of distributed renewable energy resources. Our concern was that the lack of market reform during the term of the Barnett government, beyond an ideological zeal for privatisation, was, at best, holding back energy transition and meaningful responses to climate change and, at worst, was fundamentally undermining the security, reliability and affordability of our energy system.

The inquiry examined the entire renewable energy value chain. We looked at the opportunities in mining for the critical minerals essential to produce distributed energy resources equipment and in downstream component manufacturing. We considered the value generated in the intellectual property, deployment capability and operational experience associated with these technologies. We looked at their role within power systems, working in conjunction with traditional generation—it is very important to underline that traditional generation has a very important role to play now and into the future—and network assets to act as reliable, dispatchable energy resources to supply essential system services and their ability to reduce overall total system costs by deferring, reducing or entirely removing the need to invest in costly pole and wire replacement programs. We observed that Western Australia's regulatory and market structures no longer reflected the physical realities of our electricity system and were not sending efficient signals for asset development and system operations, affecting total system costs and prices for end users. The state government has embarked on an ambitious energy market reform program, aimed at addressing the challenges of energy transition and also seizing associated economic opportunities.

My grievance today relates to two aspects of the report—partnerships for energy transition and the role of electricity network regulation. Our bipartisan inquiry acknowledged the incredible value in the state owning the electricity network and the importance of government trading enterprises in contributing to change. We noted that considerable expertise sits within the GTEs that could be commercialised, helping other jurisdictions with their own transition pathways and also potentially generating a return back to the people of Western Australia for the intellectual property that their investment in the companies that they own has produced.

We also acknowledged the benefits of competition at points in the energy value chain and highlighted the need to harness private sector innovation and attract the capital required to fund energy transition. We noted that new business models are emerging, acknowledged that the private sector has a vital role to play and that competition between private sector entities in asset procurement and operations can drive considerably lower system costs. I stand by the positions the committee reached with respect to energy market participation. The challenges presented by climate change and energy transition are far too great to be tackled by the private or public sectors acting alone; we simply must work together. To this end, I ask the minister to update the house on the opportunities that the government has created for collaboration and partnerships in energy transition.

Further, the viability of any business, public or private, depends on the signals sent through markets and regulatory frameworks. The committee found that electricity industry regulation was sending inefficient, blunt signals and contained skewed incentives, driving uneconomic asset configuration and utilisation. We noted that the return on asset structure under the regulatory regime incentivised network operators to build more assets from which they would then increase revenue, rather than optimise existing assets through utilising technologies such as distributed energy resources. There were few incentives to offer prudent discounts for non-network solutions or distributed assets when they would result in the network operator avoiding capital investment. Evidence suggested that the new facilities investment test in particular was not operating to support our rapidly evolving energy system. The regulatory framework also did not contemplate how redundant assets should be treated—a potential issue as energy production is increasingly localised, potentially reducing the utilisation of some transmission assets. Moreover, the inherent value in network management services was also not adequately recognised. As more and more DER connects to the network, the role of the electricity network operator in keeping the network stable, and particularly in facilitating the connection of more small-scale household renewable systems, was undervalued.

It was put to the committee that network regulation should adapt to reflect and facilitate the energy system changes underway and should be focused on the long-term interest of customers, align incentives with long-term customer value, be proportional and bounded by regulatory intervention and be technology agnostic. Investment decisions should be made on economic and technical grounds, not on whether a utility's asset base will grow or shrink. Access arrangement determinations also did not adequately recognise the extent to which successful transition will depend on innovation and new technologies. When energy systems, asset configurations and operations were predictable in the bad old days, it was perhaps appropriate to limit the recovery of costs associated with R&D and the installation

of pioneering and enabling technology through access regimes, but given the pace of change, network operators must be allowed to keep up and recover the costs of doing so.

The committee also considered the degree to which demand-based network tariffs operated to hamper transition, and noted that time of use and locational pricing signals sent through network tariffs would provide signals about the impact of electricity consumption and the costs of supply at particular system points and encourage more efficient asset use and development. We also considered the application of the capital contributions policy insofar as it may unfairly disadvantage microgrids and associated technologies.

The continued evolution of our energy system towards renewable and distributed energy technologies will require innovative, progressive approaches to network regulation to ensure that costs and benefits are equitably distributed. Market and regulatory frameworks are key to energy transition and will help private and public sector participants deliver the most cost-effective technological solutions; hence, I also ask the minister to update the house on steps taken around network development and regulation in response to the Economics and Industry Standing Committee's inquiry recommendations.

MR W.J. JOHNSTON (Cannington — Minister for Energy) [9.52 am]: I thank the member for Swan Hills for this grievance and acknowledge the contribution that she is personally making to the energy transition in Western Australia. I do not think any other member of Parliament has the depth of knowledge and understanding that the member for Swan Hills brings to this topic and, of course, she chaired the Economics and Industry Standing Committee during its inquiry into microgrids and associated technologies in WA, which made 21 recommendations. It was an important contribution to the continued development of our energy system in Western Australia. I am pleased to say that the government has made tremendous progress on each of the 21 recommendations, with 14 already completed and the remainder well advanced in implementation.

The work that has been done so far is quite a credit to our energy sector agencies, not the least of which is Energy Policy WA, our regulatory agencies and our proudly state-owned enterprises Synergy, Western Power and Horizon Power, and to the wider industry, which has collaborated with the state government to help position us as a world leader in microgrids and microgrid technologies. There is no clearer demonstration of this than the rollout of standalone power systems. Regional and remote parts of Western Australia are benefiting from reliable, low-emissions electricity as a lower cost alternative to maintaining traditional poles and wires. Western Australia has emerged as a leader in standalone power systems, and this investment has been backed by the state government here. Included in that is the joint venture that Horizon Power entered into with Ampcontrol to create Boundary Power. Boundary Power is a standalone power system provider in Western Australia, and I am pleased to say that it has sent its first SPS unit to Victoria—the first dispatch of a Western Australian SPS outside WA. I acknowledge that other businesses are involved in the SPS manufacturing business in Western Australia, and Western Power and Horizon Power continue to engage with Boundary Power and other providers in this important activity.

Microgrids and associated technologies are underpinned by distributed energy resources—a term that incorporates rooftop solar, community batteries and other types of products. The government published the *Distributed energy resources roadmap* in April 2020, and most of the recommendations match the inquiry recommendations and set out a pathway for the effective integration of these distributed energy resources into the system. We are well advanced on following up on that and we have published an update of that road map about where we are at in the implementation process.

Arising from that work, we have amended the Electricity Networks Access Code to ensure that DER and microgrids are considered as options to address network issues. The access code sets out the framework that the Economic Regulation Authority uses to review Western Power's investment. In September 2020, the government made changes to the access code that refreshed the new facilities investment test—NFIT—in line with recommendations 8 and 9 of the inquiry. This has enabled Western Power to invest in alternative options beyond traditional poles and wires, which can include microgrids and other technologies. Unlike traditional network investments, these new technologies can call for operational expenses in place of capital expenditure. The updated NFIT facilitates this and ensures that investment decisions are technology neutral and improve overall cost efficiency. Amendments to the code introduced a range of measures to promote innovation and development of new technologies, including the introduction of a demand management innovation allowance, which allows Western Power to invest in R&D through projects with the potential to reduce long-term network costs and recover the costs of those investments. An example of this is Pumped Up Walpole. The measures also included the provision of clarifying information on the adjustment mechanism—also known as the D-factor adjustment—that outlines how the ERA can approve non-capital costs within an access arrangement to further support the incorporation of new technologies within the system.

Other access code changes introduced obligations for Western Power to produce a network opportunity map, an alternative options strategy and a vendor register in order to support overall cost efficiency. Western Power has since published its *Alternative options strategy* and has a vendor register. Just recently, at the end of last month,

Western Power published its third *Network opportunity map*. This sets out the opportunities available for industry to propose non-network solutions to the grid, such as demand management, battery storage options or alternative options. I encourage innovative businesses in Western Australia to read Western Power's *Network opportunity map* and its *Transmission system plan* and tell us how they can provide solutions in our evolving energy system.

Finally, work is underway to introduce regulatory frameworks for new alternative electricity services, which are included in our Electricity Industry Amendment (Alternative Electricity Services) Bill 2023, which is presently before the chamber. It will ensure that as new business models emerge, consumers will still be protected and provided with safe and reliable electricity power. I also note the passage of the Electricity Industry Amendment (Distributed Energy Resources) Bill 2023 through this chamber and look forward to it progressing in the other chamber. It is another part of the government's response to the committee's inquiry.

Microgrids, DER, electric vehicles and other technologies are playing a significant and growing role in our power system. We are progressing towards implementing all the recommendations of the inquiry. That is a demonstration that this government has seized the opportunity presented by these new advanced technologies. We can provide a more flexible, more dynamic lower carbon system by adopting these new principles. I would like to update the house on our progress, and table the report, *Progress of recommendations: Inquiry into microgrids and associated technologies in Western Australia.*

[See paper 2447.]