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Senator the Hon. Sarah Hanson-Young
Chair, Select Committee into Fair Dinkum Power
PO Box 6100
Parliament House
Canberra ACT 2600

Lodged by e-mail: fairdinkumpower.sen@aph.gov.au

Dear Senator Hanson-Young,

INQUIRY INTO FAIR DINKUM POWER

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in solar, wind, hydro, bio, marine and geothermal energy, and energy storage along with more than 6,000 solar and battery installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC welcomes the opportunity to provide a submission to the inquiry. The inquiry has the potential to address the misconceptions relating to renewable energy development in Australia. An energy transformation is clearly underway as Australia's ageing coal-fired power plants exit the market and are replaced by new renewable energy and storage projects. Not only do these technologies assist in lowering emissions to meet Australia's international commitments, but they can also support the security and reliability of the electricity system and ensure affordable electricity supply to consumers.

Last year was a remarkable year for the clean energy industry and we would like to see this momentum maintained. The CEC recently compiled a list of the ten trends for clean energy in 2018. These trends demonstrate the extraordinary progress of clean energy over the past years, and by any definition allow clean energy to be considered 'fair dinkum' power for Australia. These achievements are outlined below as the basis for our submission to the inquiry.¹

The CEC would welcome further discussions with the Committee on renewable energy and energy storage and its value to the electricity system, Australian economy, regional communities and consumers.

Yours sincerely,

Kane Thornton
Chief Executive

¹ Also available at <https://www.cleanenergycouncil.org.au/news/ten-hot-trends-for-australian-clean-energy-in-2018>.

10 hot trends for Australian clean energy from 2018

Last year was a remarkable one for the clean energy industry. A whole-of-economy energy transformation is now underway in Australia. It's amazing and inspiring to watch the changes in real time, and below we've captured some of the biggest trends and milestones we saw in the year that was.

1. Record \$20 billion of investment in big wind, solar and energy storage projects

[With 14.6 GW of new renewable energy projects under construction – generating four times as much as the Liddell Power Station – it's no surprise that 2018 eclipsed the year before.](#) At the end of 2018, more than 80 wind and solar farms worth over \$20 billion were underway, which is about double the investment compared to the end of 2017. These projects also created around 13,000 direct jobs. Add in the projects completed during the year and the figures grow by another \$6 billion.

2. Records tumble and 2 million Australian homes now have a solar power system

[Aussies lived up to their sun-loving reputation in 2018, achieving a record-breaking milestone of two million homes with rooftop solar.](#) Queensland led the nation with almost 600,000 systems installed, a bit under a third (30 per cent) of the homes in the state. The power of the sun not only gave homeowners some relief from the cost of energy, but also helped the power grid cope with demand on hot summer days.

[Following on from the record-breaking year for the nation's solar homes in 2017, solar PV records went through the roof again.](#) On average six solar panels were being installed per minute in Australia, with the commercial sector growing by 45 per cent and the residential sector just a whisker behind with a 43 per cent rise in 2018.

3. Businesses buy their own clean energy

[Power purchasing agreements \(PPAs\) caused waves, with companies both on the home front and abroad choosing to invest in and purchase clean energy as a way to get their operations back in the black.](#) Overseas, Google and Apple set ambitious clean energy targets which made them the two biggest buyers of renewable energy on the planet. Back in Australia, the Melbourne Renewable Energy Project saw 14 organisations join forces with Pacific Hydro to purchase renewable energy from an 80 MW wind farm in the north-west of the state. [The Clean Energy Council signed on as a founding member of the nation's first Business Renewables Centre](#) – an information hub and membership platform formed to accelerate the corporate purchasing of large-scale wind, solar energy and storage. And [wineries, breweries, farmers and accommodation providers](#) have installed their own renewables to help cut costs.

4. British industrial billionaire shows the way for major power users

In 2017 Tesla's Elon Musk was the man of the moment, but last year British industrialist Sanjeev Gupta could do no wrong. [Mr Gupta's GFG Alliance attracted Prime Minister Scott Morrison and South Australian Premier Steven Marshall to the launch of his "green steel" upgrade project in the SA town of Whyalla.](#) The \$600 million project includes plans for a new hotel, a horticulture development and a recycling business as well as a major energy revamp towards renewables and energy storage. The council has anticipated a population boom as a result, predicting a jump from 22,000 to 80,000 in the next 10 to 20 years. The pioneering project could pave the way for other major energy users to use clean energy in the future.

5. It's the economy, stupid

[Over the course of this decade, the power generated by wind and solar power has gradually become cheaper than new fossil fuel generation.](#) Research by the Victorian Energy Policy Centre during the year found that renewable energy pushed down wholesale spot prices to \$38 per MWh in SA, with prices set to see a further decrease due to extra wind and solar production. This [research is backed up by a report released by the Australian Industry Group during 2018,](#) which shows renewables are helping to reduce power prices in a challenging environment for big energy users. We can add to this [forecasts from the Australian Energy Market Commission at the end of 2018](#) that residential power bills will fall between now and 2020/21 – most of which is due to record amounts of renewable energy and energy storage entering the system. And at the end of 2018, [a joint study by CSIRO and the Australian Energy Market Operator](#) found that renewables plus energy storage are cheaper than any new fossil fuel technology.

6. State governments led on clean energy, Turnbull Government dissolved into chaos

In 1974 the last two Japanese soldiers holding out after the end of World War II were relieved of their duty – almost 30 years after the official end of the conflict. And there are still some in the Federal Government holding out for the glory days of coal, even though new coal plants don't make economic sense. [In 2018 the Commonwealth failed to secure support for its National Energy Guarantee from its own MPs](#) and ultimately Malcolm Turnbull was ousted as Prime Minister. But [Australia's states and territories have filled the climate and clean energy policy void](#) with a range of ways to encourage new clean energy, both large and small. While the industry would prefer an ambitious and unified national policy, a range of different state renewable energy targets and programs are very welcome. Meanwhile, Commonwealth backbenchers continue to fight on in the energy wars when most of the country just wants them to do something constructive.

7. World's biggest battery out-performs expectations

[Tesla founder Elon Musk reportedly charged "mate's rates" to build the world's biggest lithium-ion battery in South Australia – and then claimed bragging rights for delivering the project ahead of schedule and on budget.](#) The Hornsdale Power Reserve saved energy users \$3.5 million in one five-hour period on 14 January last year. And overall it saved the market around \$40 million on the cost of services to stabilise the grid throughout the year. Not bad for something [Scott Morrison compared to the Big Banana in Coffs Harbour](#) in July last year when he was the Treasurer.

8. The grid emerges as the next frontier

With more renewable energy being built across the country than any at any other time in Australian history, connecting to the power grid is shaping up as one of the industry's big challenges in 2019. [A Clean Energy Council survey of senior executives in the industry last December](#) identified grid connection as their biggest concern, beating out long-term policy certainty for the first time. The Australian Energy Market Operator and network businesses are working closely with the industry to tackle the issues and improve the process. But the most important thing for clean energy developers is transparency so that it is clear how long the process will take and how much it will cost.

There is also a clear need to build new poles and wires efficiently to connect new clean energy projects to the power system. [The Integrated System Plan \(ISP\) developed by the Australian Energy Market Operator](#) and [the NSW Transmission Infrastructure Strategy are very good initiatives](#) which will help to make our power cheaper, cleaner and more reliable.

9. The wind changed on climate and energy

The Victorian state election helped to resolve internal conflict within the Coalition on one particular issue – the idea that opposing action on climate and clean energy is a vote-winner. [The Andrews Government offered ambitious progress on this issue](#), and convincingly beat Matthew Guy's Liberals in November. The clean energy industry is hopeful that the ripples from the election result will help to bring the major parties closer together on this issue, and [welcomes the NSW Government's call for a national policy which reflects science, engineering and economics](#). While many people actively voted against the Gillard Government's carbon tax because they didn't understand it, wind and solar power enjoys strong public support and is much easier for people to get their heads around. And progress on climate change becomes more urgent with each passing year.

10. Hydro pumped for big year ahead

One of Australia's oldest clean energy technologies was back in the spotlight in 2018. The Snowy Hydro 2.0 expansion moved a step closer, with [the Federal Government buying out the share held by the Victorian and New South Wales governments](#) for a cool \$6 billion. [The water in the project will be pumped by wind and solar to make it both cleaner and cheaper](#). More than a dozen [potential sites have also been identified by Hydro Tasmania for the Battery of the Nation initiative](#), which would complement wind and solar projects on the mainland. [The New South Wales Government announced plans for 24 new pumped hydro facilities](#), which it says would produce about half the power the state needs on the hottest days and about three times the output of Snowy 2.0. New private projects are attracting attention as well, [such as the one by Genex in North Queensland](#) which will use the pits from an old gold mine to form a pumped hydro power plant.