



## Full Day Hansard Transcript (Legislative Council, 29 May 2014, Proof)

### Proof

Extract from NSW Legislative Council Hansard and Papers Thursday, 29 May 2014 (Proof).

### TRANSFORMING NSW ENERGY SECTOR (TOWARDS 100 PERCENT RENEWABLES) BILL 2014

**Bill introduced, and read a first time and ordered to be printed on motion by Dr John Kaye.**

#### Second Reading

**Dr JOHN KAYE** [10.01 a.m.]: I move:

That this bill be now read a second time.

It is time we had a conversation and confronted the consequences of an energy economy dominated by coal and gas. It is time for a vision that goes beyond the pollution-intensive, business-as-usual model and reaches out to a jobs rich, sustainable future based on 100 per cent renewables. It is time for that conversation to begin with the reality that fossil fuels dominate electricity generation in New South Wales and in the national electricity market. It is time we faced up to the 60 million tonnes of carbon dioxide that gas- and coal-fired power stations in New South Wales emit each year. It is time we recognised that, on quite conservative estimates, that 60 million tonnes of carbon dioxide is inflicting \$12 billion worth of damage globally on health, infrastructure, food production and coastal populations, and is having other human costs.

That conversation must recognise the \$800 million in coal-fired power station related health costs in New South Wales. It must recognise the governance integrity impacts of coalmining and gas extraction industries. It must recognise the local social environmental damage that is inflicted on communities across New South Wales by coalmines and coal seam gas wells, and the growing community outrage, which is on clear public view in places such as Bentley and Leard State Forest. That conversation must focus on jobs and on the economy as much as on the environmental imperatives. It must recognise that coal and gas are dead-end technologies. It must recognise that, while coal and gas are dead-end technologies with declining levels of employment, with the appropriate intelligent policy settings, wind, solar, sustainable biomass and energy efficiency will generate tens of thousands of new jobs and new investment in our economy—in research, development, design, manufacturing, marketing, installation, operations, maintenance and management. And it will do so in numbers that far outstrip employment in the coal industry, the coal seam gas industry and the coal-fired electricity industry.

That conversation must go beyond just seeing renewable energy as a boutique source of power; it must see renewable energy as a source of power that is at the heart of the future of New South Wales. I note that this morning the New South Wales Government released its response to the expert panel's call for submissions into the Federal Government's Review of the Renewable Energy Target. I welcome the opening statement of that review, which says:

The NSW Government is committed to a secure, affordable and renewable energy future for NSW.

For the first time, the New South Wales Government has acknowledged that the future of this State is based on renewable energy.

**The Hon. Dr Peter Phelps:** Shame!

**Dr JOHN KAYE:** I acknowledge the interjection by the Government Whip.

**The Hon. Dr Peter Phelps:** I'm no lackey of the executive. I've got my own mind, thank you very much.

**The PRESIDENT:** Order! I call the Hon. Dr Peter Phelps to order for the first time.

**Dr JOHN KAYE:** I note that it is not just The Greens and the community that are calling for a renewable energy future; it is now also the Baird Government, and I welcome its commitment. While the Government's response document is flawed in some aspects, it is a huge step forward compared with the former Government's attempts to stymie the development of wind power. If the conversation we have about renewable energy is to be honest, it must be based on the facts that lead us to the inevitable conclusion that this State has to have 100 per cent renewable electricity generation and that that objective is possible, it is affordable and it is essential. This bill will bring that conversation into this Parliament by laying out a policy and governance road map to achieve 100 per

cent renewables by 2030. However, it is part of a much bigger conversation that is engaging the community, experts, the renewable energy industry, the public sector and the workforce throughout New South Wales.

The bill proposes to reach its goal of 100 per cent renewables by 2030 by: first, creating an expert panel to develop a plan for the best mix of renewable technologies and energy efficiency by 2030; secondly, by requiring the expansion of renewable technologies and starting to close down coal-fired power stations by 2017; thirdly, by banning the development of new coal-fired power stations and new fossil gas-fired power stations over a certain size; and, fourthly by requiring the Government to table a timetable to close down all coal-fired and gas-fired power stations by 2030. The bill develops employment guarantees for all employees and it creates a sustainable and fair feed-in tariff for rooftop solar and other distributive energy sources. The bill repeals the draft planning guidelines that are holding the wind industry to ransom and encourages the growth of those industries.

Our approach uses regulation to drive public and private sector investment in the renewable energy industry based on a clear timetable to exit from fossil fuels. Our approach is based on the objective of building a robust and resilient economy for New South Wales in the new, clean technologies. There is no doubt that some members in this Chamber will say that this goal is impossible. They will be wrong. Professor Mark Diesendorf from the University of New South Wales in referee publications in the journal *Energy Policy* has published his studies based on an hour-by-hour simulation over two years of historic data on wind and sunshine, and energy demand records. Using a hypothetical mix of currently available off-the-shelf renewable energy technologies, he showed that the lights would stay on without gas and without burning coal. He showed that industry would continue to operate and that, indeed, 100 per cent renewable energy technology is available right now.

Based on wind power, rooftop solar, concentrated solar thermal power and on burning sustainable crop waste, the University of New South Wales has shown that the economy can continue to operate without gas and without coal. A University of Melbourne study commissioned by Beyond Zero Emissions reached a similar conclusion. Some people may dispute what happens at the University of New South Wales and the University of Sydney. However, they will have a much harder time disputing the April 2013 report of the Australian Energy Market Operator, which looked at low projections for 2030 and 2050 and found that with a mix of sustainable energy technologies it was possible to meet the reliability standard of electricity generation remaining available 99.998 per cent of the time.

<5>

These hard-nosed engineers, whose sole objective is maintaining the reliability of the electricity industry, concluded that it is entirely possible to create a 100 per cent renewable future for the electricity networks on the national electricity grid, including New South Wales.

All three of the studies show that the diverse location of renewable energy sources will smooth out the impacts of variabilities in sunshine and wind, especially in the presence of concentrated solar thermal storage and the combustion of sustainable crop waste. All the studies were based on existing technologies. There is no question that massive technology development will make the task easier as it progresses. In the time I have been drafting this bill and working on bringing it to Parliament the cost of rooftop solar power stations has fallen by about 15 per cent; and a conservative estimate is that it will continue to fall in real terms by 5 per cent every year. The next complaint brought against the bill will be that it is simply unaffordable. It is time to dispel the myth that renewable energy is expensive. In a study released on 7 February 2013 Bloomberg New Energy Finance concluded:

... electricity can be supplied from a new wind farm at a cost of AUD 80/MWh (USD 83), compared to AUD 143/KWh from a new coal plant or AUD 116 /MWh from a new baseload power plant, including the cost of emissions under the Gillard government's carbon pricing scheme . However, even without a carbon price ... wind energy is 14% cheaper than new coal and 18% cheaper than new gas.

Mr Michael Liebreich, the Chief Executive of Bloomberg New Energy Finance, observed:

The perception that fossil fuels are cheap and renewables are expensive is now out of date.

Not only is that perception out of date; it will be increasingly out of date as time goes on. Bloomberg further stated:

Bloomberg New Energy Finance's research on Australia shows that since 2011, the cost of wind generation has fallen by 10% and the cost of solar photovoltaics by 29%. In contrast, the cost of energy from new fossil-fuelled plants is high and rising.

Bloomberg came to the definite conclusion that renewable energy is currently cheaper and will get much cheaper in the future. UBS, the American merchant bank, released data this month showing that by 2018, based on a 5 per cent annual capital cost reduction in rooftop solar, off-grid roof-top solar will be cost compatible for the average household and beyond 2018 it will be cheaper. And it is likely to get cheaper at an accelerating rate. The 5 per cent assumption made by UBS is quite conservative.

It is clear that the day of cheap fossil fuels is over and the day of expensive renewable energy has long since passed. Cost estimates based on Beyond Zero Emissions work is that our plan would cost about \$10 billion a

year over 15 years. That is based on current technology costs; it will probably cost a lot less as some technologies continue to become cheaper. Some will say that \$10 billion a year in capital investment is a lot. However, when we compare it with the cost of doing nothing we can see that it is a relatively small amount. At \$200 a tonne, which is a conservative estimate of what each tonne of carbon dioxide costs the planet when it is released, the cost of operating the New South Wales electricity industry is about \$12 billion a year. The carbon dioxide that comes from the New South Wales electricity industry inflicts \$12 billion of damage on the future of food production, agriculture, infrastructure that is impacted by droughts and sea level rise.

When that is added to the public health costs of coal-fired power stations, the subsidies for cheap fuel and the subsidies that go to coal-fired power stations and the coalmines that support them, the annual cost of business as usual, the do-nothing cost, is probably about \$14 billion a year or more. That begins to make the cost of making transitions look highly affordable. But the real question that people ask is: What will be the impact on power bills by 2030 under the scheme outlined in this bill? It is straightforward. The real question is: If the State does nothing, if we stay on the same path of increasing the domination of coal and gas, what will happen to power bills compared with the transformation to 100 per cent renewables? Both Bloomberg and UBS suggest that the falling costs of clean technology will result in lower power bills by 2030. Further, any attempt to internalise the real costs of fossil fuel combustion to bring into power bills any reflection of the real costs imposed by releasing 60 million tonnes of carbon dioxide each year will make wind and solar much cheaper than fossil fuels.

Further, the benefits of distributed generation will put more downward pressure on power bills. Avoiding the cost of building new powerlines, transformers, and distribution and transmission infrastructure is one of the most effective ways of reducing power bills. Despite the propaganda coming from the former O'Farrell Government—and indeed, sadly, from the Baird Government—it is not the carbon price that has resulted in the 50 per cent increase in power bills over the past six years. It is overwhelmingly ridiculous decisions about supplier reliability made by the former Labor Government and the then energy Minister, Frank Sartor, that drove up investment in wires and poles, which punished consumers and households across the State.

Some members will say that such a transformation is not essential. I will leave aside the moral imperative of contributing to the global effort to live sustainably. That should be sufficient, but clearly for some it will not be sufficient. But I say to those people that there is an economic imperative to make the transition. Jobs in the fossil fuel industry are doomed, and not simply because of the automation of mines and power stations and the increasing replacement of workers in those industries by automation and robots. It is more about what will happen globally as consensus builds that the planet is in trouble and pressure comes on the New South Wales coal industry. New South Wales has two choices. First, we can go ahead with business as usual and face the certainty of the day when the world turns to Australia and says, "Not only do we no longer want your fossil fuels but you cannot continue to emit 50 tonnes per person per year in greenhouse gases."

As the rest of the world makes the transition to renewable energy, Australia risks being left behind and becoming a global pariah that will increasingly attract international attention and pressure to make a transition to our own carbon intensive industries. Business as usual is the carbon dead end. It must be avoided because it is extremely expensive. When we reach that carbon dead end we will not have control over the timetable, jobs and technologies. We will be forced into rushed and panicked decisions to make the transition that the rest of the world will have made ahead of us. We will be importing technologies and losing opportunities for jobs. The alternative is that we make our own determination on a timetable. If we do that we can generate jobs—73,800 direct and indirect jobs, as estimated by the University of Newcastle, and possibly more if we become world leaders and get involved in the business of exporting technology and services.

<6>

But we can only do this if we make our own choices. We can only do this if we drive a timetable that puts us ahead of the rest of the world, not behind it. New South Wales needs to be a world leader in sustainable renewable energy. New South Wales needs to get the jobs, and the leadership that will enable us to get the jobs. This bill lays out a plan that is possible. That possibility derives from studies by the Australian Energy Market Operator that it is affordable, it will lower costs and household power bills, and it is essential if New South Wales is to avoid the carbon dead end that will hollow out jobs and destroy our economy. I turn now to some of the detailed provisions in the bill and I will explain how The Greens will deliver this plan. Part 2, clause 6 (1) of the bill states:

(1) The Government of New South Wales is required to implement the process referred to in section 5 so that those energy technologies and energy efficiency measures make it possible for sufficient energy to be generated by renewable energy, or saved through energy efficiency measures, so that at least one coal-fired generator with a capacity of at least 500 megawatts, and a capacity factor of at least 73%, could be replaced by those sources, and decommissioned, by January 2017.

To this end, the Minister for Resources and Energy is to appoint an expert panel to consider and make recommendations on a portfolio of energy efficiency and renewable energy measures to meet this target. The panel is to consist of at least five independent experts, one individual with expertise in finance, representatives of UnionsNSW, the Council of Social Service of New South Wales, the Nature Conservation Council of NSW, the wind industry, the solar industry and the energy efficiency industry. That panel is to take into account a number

of criteria, including the need to protect low- and middle-income households from rising electricity bills; opportunities for the New South Wales Government to support and facilitate community owned and operated renewable energy generation projects; the need to remove barriers that prevent private investment in renewable energy technologies; and the environmental, social and economic benefits of direct public investment and ownership of renewable energy projects.

Part 4, clause 14, of the bill creates a timetable for the closure of all existing coal-fired power stations by 2030. Acting on the advice of an expert panel, the Minister for Resources and Energy will be required to draft and table in both Houses of Parliament a timetable for the closure of all existing fossil-fuelled power stations by 1 January 2030. The timetable will be binding but can be altered by a resolution of both Houses of Parliament. The timetable is to include job guarantees for all displaced power station workers of a position on an equivalent pay scale, an equivalent level of job security and all benefits, including long service leave and superannuation to be preserved. Part 5, clause 16, of the bill imposes bans on new fossil-fuelled power stations.

Schedule 3 to the bill fixes up problems that have occurred in the distributed generation of electricity, including providing for a feed-in tariff for all distributed renewable energy at a price set by the Independent Pricing and Regulatory Tribunal that approximates the relevant retail purchase price. No longer will households get almost nothing for their rooftop solar stations but will be paid a reasonable price, which represents the profits that are made from that electricity by the electricity retailers. Part 7, clause 21, fixes the wind power problems that were created by the former O'Farrell Government's draft NSW Planning Guidelines: Wind Farms. Those guidelines are to be replaced with rational guidelines that are based on science. They include sensible buffer distances and noise standards that reflect the South Australian standards.

It makes no sense to drive away 28 wind projects that offer New South Wales the possibility of \$7.2 billion in investment, 4,000 jobs and reducing our annual carbon dioxide output by 16.8 million tonnes. That would be a 28 per cent reduction in the State's greenhouse gas emissions from its electricity industry. I look forward to the debate around the future of the wind industry, which is a critical, initial and long-term player in the transition to 100 per cent renewables. It deserves better treatment than it is receiving from the Abbott Government, with its attack on the renewable energy target, and from the Baird Government's draft wind planning guidelines. The attack on the wind industry needs to end. The industry must be recognised as a responsible citizen that is critical to the future of this State, and part 7 of our legislation begins that process. Part 6 of the bill will remove New South Wales Government subsidies to coal and fossil gas operations for the purposes of electricity generation and redirect those subsidies into the renewable energy industry.

I look forward to the heated debate in this Chamber that this bill will stimulate. Some members will be worried about the stranded assets problem: What will happen to existing fossil fuel generators in a 100 per cent renewables future? I say to them that that problem is inevitable. This State will become 100 per cent renewable one way or another. Sooner or later those fossil-fuelled power stations will become the dinosaurs they deserve to be right now, and thus be stranded assets. This process has been occurring for some time. At the time of power privatisation The Greens warned that these assets were impaired not just by a carbon price but by an imperative for this State to shut down its fossil-fuelled generators. Those who purchased the power stations cannot say they were not warned. My colleagues and I made public statements to that effect. I said in this Chamber that privatisation would undermine the capacity to close those power stations cheaply. Nobody can say they were not warned. That time has now come and those warnings were correct.

Some people will be worried about jobs in the electricity industry. We estimate that there are about 5,800 jobs in the fossil fuel fired electricity industry, about 1,800 in coal-fired power stations and about 4,000 in that portion of the State's coalmines that provide coal to the coal-fired power stations. But those 5,800 jobs are a relatively small number compared with the massive number of jobs that will be generated in the renewables sector. This bill has at its heart an employment guarantee promise to every single worker in the coal-fired electricity industry that no job will be lost. It is a legislated promise that every single job will be compensated and available for workers in the renewable energy sector. This is not a jobs killing bill; it is a jobs creating bill. This bill will create a future for New South Wales that is jobs rich. Those who currently work in coal-fired power stations and in the coalmines that support them deserve the right to be moved first into new jobs, and The Greens will secure those jobs for them. They will be exciting, worthwhile and unionised jobs that will create a robust and secure economic future.

Some people will express concern about the impact on power bills. I say to them that there are strong reasons to believe renewable energy and energy efficiency can bring down power bills. Indeed, based on the evidence of Bloomberg and what is coming out of the University of New South Wales, if we want lower power bills in 2030 the worst thing we can do is sit back and continue with business as usual. New South Wales needs a transition plan that not just generates jobs but brings down household bills. Yes, the price of electricity might increase but households do not pay the price; they pay the product of price and quantity. The trick is to bring down quantity with energy efficiency to stop the waste of energy and help households avoid squandering energy to make sure they have the opportunity to participate in the renewable energy revolution that will come to this State sooner or later. Some people reject the climate science and say that we do not have to make this change. They claim there is some kind of conspiracy. They say that the billions of tonnes of carbon dioxide emitted into the atmosphere each year are not affecting the climate, and that we do not need to worry about it. We say it is their right to

believe that but The Greens do not agree with them.

Every single measure in this bill will leave New South Wales stronger, wealthier, with more jobs, with an economy that is more robust and resilient, less dependent on commodities and more dependent on the skills of the State's workforce.

<7>

Everything in this bill says that we build a stronger New South Wales by making that transition. If for some bizarre reason members of this Chamber do not accept the overwhelming consensus science that says we have to reduce our greenhouse gas emissions, they should support this bill because it, even without climate impacts, is in the best interests of the State. Yes, it will annoy the fossil fuel industry and it will get offside those who are holding impaired and stranded assets. It will cause some people to be uncomfortable. It lays out a difficult and challenging path for New South Wales, a path that requires a skilled workforce, a path that will protect our TAFE system to make sure that we have the skilled workforce to make that transition in 15 years. But at the end of the process we are not just stronger because of our economy, we are stronger because we work together to achieve an outcome that is for the good of the people and for the good of the planet. This is a conversation that we have to have if we are to build a State that confronts the challenges of the twenty-first century in a way that leaves us proud of what we have done in this Chamber and proud of what we have done as a State. I commend the bill to the House.