

## Second Reading

**Ms LEE RHIANNON** [4.16 p.m.]: I move:

That this bill be now read a second time.

The Greens Peak Oil Response Plan Bill 2008 deals with one of the most challenging issues of our time—oil vulnerability. The term "peak oil" describes the phenomenon whereby global conventional oil production will reach a peak and then start an irreversible decline. The rising price of petrol and other oil products and the decline in these energy supplies will increasingly dominate the work of all levels of government in the coming months and years. We need a plan to respond and manage the peak and decline of oil. The Greens bill provides a way forward.

The Greens peak oil response plan sets up a Peak Oil Taskforce to inquire into and report on the best strategies to mitigate the impact of peak oil on New South Wales; it requires a moratorium on constructing oil-dependent infrastructure, such as motorways, to be in place while the task force undertakes its work; and it requires that once the Peak Oil Taskforce has completed its work the New South Wales Premier will respond to the task force's recommendations by developing a comprehensive action plan across government, with its implementation overseen by a parliamentary committee.

Interest rates, food bills, construction costs and many other aspects of our day-to-day lives will be negatively impacted because of the oil scarcity. The New South Wales Government will be highly irresponsible if it does not back the peak oil response plan. A number of governments, in Australia and overseas, are preparing for peak oil. A report commissioned by United States President George W. Bush's Department of Energy has detailed the enormity of peak oil. The report states:

The world has never faced a problem like this. Without massive mitigation more than a decade before the fact, the problem will be pervasive and will not be temporary. Previous energy transitions (wood to coal and coal to oil) were gradual and evolutionary; oil peaking will be abrupt and revolutionary.

One of the authors of this report is Robert Hirsch, an energy consultant to the oil industry, who has previously worked for the RAND Corporation, Exxon and the Atomic Energy Commission. This issue could not be more real and could not be more urgent.

Peak oil is about the inevitable decline of oil supplies, and definitely the end of cheap accessible oil. The peak refers to the top of the bell curve. When peak oil is reached, oil will still be available, but what is left is far harder to extract, environmentally far more damaging to retrieve, often of much poorer quality, and often located in areas subject to numerous geopolitical issues.

Oil prices are climbing. In the last seven years the price of oil has risen fourfold. In 2003, the price of West Texas Intermediate crude oil—a widely watched benchmark of crude oil price—averaged about \$US31 per barrel. By 2006, the average was about \$US66 per barrel, and in mid November 2007 the price rose to more than \$US90 per barrel. As of this week, West Texas crude hit more than \$US123 a barrel.

The estimates on when we reach peak oil vary. We may not be able to pinpoint the exact date until after it has happened—this is known as the "rear-view mirror effect". However, there is wide agreement that oil supplies are in decline. The Australian Petroleum Production and Exploration Association reports oil production in this country peaked in 2000, and oil production in the United States' peaked in 1970. Of the top 30 oil producing countries, 15 have reached peak oil, including Iran, Kuwait and Russia. Of those that remain, the reliability of the data supplied is questionable.

The 2007 report of the Senate Rural and Regional Affairs and Transport Committee inquiry into Australia's future oil supply and alternative transport fuels found that Australia's net self-sufficiency in oil is expected to decline significantly as future discoveries are not expected to make up for the growth in demand and the decline in reserves as oil is produced. I recommend members read the report from this inquiry. The committee's work further underlines the need for a peak oil response plan in New South Wales. I take this opportunity to congratulate my colleague Greens Senator Christine Milne on her work in establishing the inquiry and in this most important area. Last month the Federal Minister for Resources and Energy, Martin Ferguson, speaking at the conference of the Australian Petroleum Production and Exploration Association stated:

With only about a decade of known oil resources remaining at today's production rates, Australia is looking down the barrel of a \$25 billion trade deficit in petroleum products by 2015.

Unfortunately, many of the Federal Government's plans involve delaying a responsible response to Australia's oil vulnerability. The Federal infrastructure Minister, Anthony Albanese, has committed to \$17 billion over five years

for the national roads network. Matt Mushalik, a former civil engineer and a peak oil adviser, questioned Minister Albanese about this irresponsible policy in the era of peak oil and was given the response, "You won't get people out of their cars." The head-in-the-sand approach from Federal Minister Albanese further underlines the need for New South Wales to take the lead on dealing with oil vulnerability. Mr Mushalik, who has done extensive work on peak oil in Australia and overseas, has warned that we are already far behind in the planning needed to handle peak oil. He stated recently:

Since Australian oil production will be half in just 10 years a smooth transition is absolutely impossible.

Mr Mushalik also noted:

Economic growth itself is dependent on the oil price and the physical availability of oil.

Scientists, economists and energy specialists have been talking about the peak oil phenomenon for more than 40 years. M. King Hubbert presented a paper to a 1956 meeting of the American Petroleum Institute, predicting that overall petroleum production would peak in the United States between the late 1960s and the early 1970s. This prediction came true in 1970, and people have spoken of Hubbert's Peak ever since.

The Greens are ready to work with all parties in the Parliament on this most critical issue. The peak oil response plan provides a means to progress this most important task. As the reality and ramifications of a global peak sinks in, unlikely allies are coming out of the woodwork—peak oil is gaining cross-party, non-partisan support in many countries. In 2005 in the United States the Republicans passed motions calling on America, in collaboration with other international allies, to establish an energy project with the magnitude, creativity and sense of urgency of the man on the moon project to develop a comprehensive plan to address the challenges presented by peak oil.

In New South Wales such a comprehensive plan is set out in the bill. The key vehicle of the plan is the peak oil task force, which will be made up of at least five people appointed by the Premier. The work of the task force will be very specific in assessing the impact of peak oil. This work will be undertaken by analysing the oil-based fuel requirements of the State and the people of New South Wales until 2020. This work will be undertaken for different fuel types and economic sectors. It will determine the effect of peak oil on critical local facilities in New South Wales, including hospitals, schools and emergency services, and the provision of food and water supplies. Determining the impact of peak oil on the New South Wales economy and employment trends will be critical to the work of the task force. It will assess where retraining and redeployment of employees will be needed. Specific attention will be paid to the Australian motor vehicle industry and the mining industry.

Considering the geographic spread of New South Wales and that almost one-third of the population—27 per cent—live in rural and remote areas, the task force will investigate the disproportionate effect of peak oil on disadvantaged, regional and rural communities. In considering how to prepare the people of New South Wales for peak oil, the task force will assess the need for public education, a system of fuel rationing and what new public transport infrastructure will be needed. There is a big shift back to public transport. Last year there were an additional 10 million trips on CityRail. Patronage on the East Hills line rose by 7.5 per cent and patronage on the Illawarra line increased by nearly 4 per cent. This is a significant shift in one year and further highlights the need for the Government to address the oil vulnerability we are already facing.

The task force will pay particular attention to the impact of peak oil on transport and agriculture in New South Wales. Petroleum products comprise 50 per cent of energy end use, and three-quarters is directly consumed by the transport sector in the main in road and air transport. Australia is the third highest per capita consumer of gasoline in the world after the United States and Canada. The Australian Geological Survey Organisation estimates that Australia's self-sufficiency in oil and condensate is expected to decline from 85 per cent in 1999 to 42 per cent in 2010. In the transport sector most of these petroleum products are used by private cars and commercial trucks for inter and intra freight movements.

When it comes to considering public transport options, the work of the task force will be extensive. Expanding public light and heavy rail, bus and ferry services in New South Wales cities and regional areas will play a major part in the response to peak oil. The urgent need for this work was highlighted at a recent conference on the future of Western Sydney. Curtin University Professor Peter Newman warned that unless public transport was considerably expanded, vast areas would be in danger of dying from the outside in. Professor Newman described United States car-dependent cities, where whole suburbs are boarded up and abandoned. People's dreams have gone and it is not the subprime mortgage meltdown; it is peak oil prices.

Professor Newman was one of the authors of "Sustainability and Cities: Overcoming Automobile Dependence", a study that drew up a comprehensive database from 46 cities around the world on oil depletion. The study shows that reducing car dependence, promoting electric transport and reducing urban sprawl are critical factors if cities are to become more sustainable. This study found that private transport energy use per capita is inversely proportional to city population density by factors of up to six-to-one.

Brian Fleay, an associate of Murdoch University's Institute for Sustainability and Technology Policy, and author of "The Decline of the Age of Oil", argues that the challenges for Australia's farmers will be greater than for city-based private car users when peak oil kicks in. The agriculture industry—through the use of machinery, fertilizers and pesticides—is highly dependent on the petroleum industry. This will be assessed by the task force with regard to food affordability and availability, and the impact of alternative fuels on agricultural practices.

While the introduction of nitrogen and phosphorus fertilisers prevented the collapse of cereal cropping in this country last century, this farming practice now has a limited life because of looming petroleum shortages. At every stage oil products are involved in fertiliser production. Diesel power plays a critical part in mining the phosphorus minerals and sulphur needed to manufacture and distribute the superphosphate on farms. Nitrogen fertilisers, in widespread use in Australia since the 1960s, are even more dependent on oil products. Nitrogen fertilisers, such as urea which is made from natural gas, have become extensively used to maintain yields and farm produce quality from Australia's poor soils. Their manufacture is eight to 10 times more energy intensive than phosphate fertilizers.

Mr Fleay has described this form of agriculture—mechanised agribusiness—as a way of converting petroleum into food. Using these intensive fertilising methods, Mr Fleay has pointed out that Australia has been successful in feeding 60 million to 80 million people in the world. This past success means that today Australian farmers face a greater challenge than farmers anywhere else in the world in adapting industrial agriculture to the era of peak oil. Clearly, dealing with peak oil is a complex issue that will require the Government to work closely with communities across the State. To facilitate the bill this will require the task force to hold public meetings, and enable the public and non-government organisations to make submissions.

The Australian Association for the Study of Peak Oil and Gas, and EcoTransit are two organisations that have been consistent voices warning of the implications of peak oil and putting forward well-researched and argued solutions. The Association for the Study of Peak Oil and EcoTransit could make an invaluable contribution to the work of this task force. The Association for the Study of Peak Oil has called for planning to be undertaken now to deal with petrol droughts and oil crises just as we do for cyclones and bushfires. The Peak Oil Taskforce will be established by the Premier and will commence operations within one month after the commencement of this Act.

There is no solution to peak oil. Our responsibility is to mitigate against its catastrophic effects. We must accept that science, technology or fairy godmothers will not be able to summon an alternative out of thin air. However, as there are ongoing attempts to promote a business as usual approach arguing that substitutes for petroleum products are available, I will outline why these assertions are misleading. Energy from alternative fossil fuels such as tar sand oil, liquid coal and first-generation biofuels have unacceptable environmental consequences and biofuels will contribute to food shortages and famine in many low-income countries.

The energy-intensive conversion of tar sand generates two to four times the amount of greenhouse gases per barrel of final product as the production of conventional oil. Oil from shale is an even bleaker prospect. It has one-tenth the energy of crude oil. Converting shale to oil requires a huge amount of energy—possibly as much as 1,200 megawatts of generating capacity to produce 100,000 barrels per day. Coal can be converted to diesel fuel via an incredibly expensive and water-intensive process that would eventually produce about double the carbon dioxide emissions of conventional diesel. The only example of coal gasification and liquefaction being done on a large scale is from Nazi Germany, where significant amounts of slave labour were used.

Some oil companies are vigorously pursuing these alternatives—with support from the New South Wales Government in some cases—in the hope they will allow us to blithely continue our consumerist, expand-at-all-costs, growth-is-good lifestyles. Biofuels offer no immediate solution when dealing with oil vulnerability. The United Nation's Food and Agricultural Organisation argues in a paper released last month that biofuels negatively affect those in poorer countries as these crops compete directly with food crops for farmland, water and investment money. Food prices increase as a result and, the paper says, biofuels "put at risk access to food by the poorest sectors." Fertilisers used to grow biofuel crops release more greenhouse gases than the fuel produced would save.

Biofuels are now popular with politicians and corporations keen to present themselves as serious about the energy crisis. For many biofuel backers the real interest is in the bottom line. Worldwide investment in biofuels rose from \$5 billion in 1995 to \$38 billion in 2005 and it is expected to top \$100 billion by 2010 with the likes of BP, Ford, Shell and Richard Branson eyeing off the profits to be made. The biofuel industry is directly linked to rainforests being cut down to make way for crops and peat bogs being drained—both valuable as carbon sinks that absorb carbon dioxide from the atmosphere. It has been estimated in the United States of America that if even half of the country's automotive fuel came from corn-based ethanol, 80 per cent of the country's cropland would have to be given over to biofuel crops. The argument pushed in some quarters that the Australian biofuel industry does not encounter the same problems as overseas is misleading. Agricultural land in Australia plays a critical role in food export crops. We cannot afford to lose any of this land to biofuel crops, and the spin-off of greenhouse gas emissions from fertiliser-intensive biofuel crops cannot be ignored.

A recent CSIRO report on biofuels in Australia warns that a large-scale biofuels industry could force the import of wheat in drought years, attracting significant biosecurity risks. The report states that if the ethanol industry does

expand this will see increased competition with grains for food and with feed grain for the livestock industry. Land, water and labour in regional Australia will also come under competition pressure if the ethanol industry expands. Many of the other plants being touted as rich sources of biodiesel—often because of their hardiness and ability to grow on marginal land—are classified as invasive weeds, and the Invasive Species Council of Australia has strongly recommended against their importation.

A wide-ranging debate is occurring about the role of biofuels in meeting the oil crisis. What we need to build into this dialogue is the agreements that we do not make policy decisions on the possible eventual development of biofuels that cater for private vehicle use. We have the fancy name biofuels, but until we have a fuel that does not increase greenhouse gas emissions, does not compete with food production, and does not damage biodiversity we must ensure public policy is addressing how our economy, agriculture, transport and all activities change to meet the inevitable reduction in liquid fuels. We cannot allow public policy to work on the assumption that enviro-friendly biofuels allow a business as usual position on private vehicle transport.

The Greens are also unequivocal on another purported alternative to oil—nuclear energy. Nuclear energy is unsafe and expensive, produces dangerous radioactive waste, requires fossil fuel input at all lifecycle stages, will provide no discernable reduction in greenhouse gases once the high-grade uranium is exhausted and contributes to the proliferation of deadly weapons. There is a role for electric vehicles but this form of transport will not replace petrol-powered cars and trucks. Considering that most of our electricity comes from coal-fired power stations, the resulting greenhouse gas emissions from electric cars minimise any advantage that could be gained from these non-petrol driven vehicles. We believe that a clean energy future will include a number of different complementary technologies such as wind, solar, wave and tidal, biomass from waste products, and small-scale hydro projects.

Energy efficiency measures have an enormous role to play in managing oil vulnerability, one that is frequently glossed over in the rush to find a substitute fuel. As numerous studies have shown, this has the added benefit of generous cost savings for relatively simple actions. The Federal Government's 2004 energy white paper reported that many Australian businesses and households could save 10 per cent to 30 per cent of their energy costs without reducing productivity or comfort levels. These reductions could save \$5 billion to \$15 billion, while at the same time drastically reduce carbon dioxide emissions.

Peak oil will change our way of living, and affect the very structure of society. On a global scale peak oil risks massive social dislocation, global insecurity and conflict. It also risks a major heightening of existing social inequities—and this is a key issue the bill asks the task force to explore. As oil prices continue to climb, those who can afford to will continue to live as they have. Those who cannot afford to will suffer disproportionately. Unemployment will increase, and financial markets will be thrown into turmoil. Vulnerable and marginalised populations are likely to grow if we do not have a peak oil response plan. The pressure will increase on essential community services. How to develop an equitable scheme is a complex matter, particularly for people living in rural and regional communities where public transport is not an option. We will have to prioritise the use of remaining oil stocks in a way that avoids mirroring the current distribution of resources—that is, those at the top get the cream, and the rest get what is left.

The task force will assess the effect of peak oil on disadvantaged, regional and rural communities, and work on a risk management strategy to deal with the short-, medium- and long-term impacts of peak oil. This work will be undertaken with local governments, businesses, unions and community groups. By drawing up a list of priority uses of petroleum and other oil-based fuels the task force will be able to recommend to the New South Wales Government ways to ensure that dwindling oil supplies are used responsibly and for the benefit of all. Author James Howard Kunstler points out that suburbia was made possible by our exploitation of cheap oil, and the end of cheap oil will also be its undoing. He notes that only the very wealthy will be able to drive an hour each way to work.

A number of jurisdictions are preparing for peak oil. They include Spokane, San Francisco and Portland in the United States, Kinsale in Ireland, and Totnes in the United Kingdom. In Australia, Maribyrnong City Council, covering the inner suburban area west of the centre of Melbourne, is probably Australia's most peak oil aware council. Last month the council unanimously endorsed a peak oil policy and action plan. In 2005 Queensland established the Queensland Oil Vulnerability Taskforce with the aim of commissioning a report tabled in 2007 entitled "Queensland's Vulnerability to Rising Oil Prices". Queensland led the world when it took this action. Importantly, the Queensland taskforce report identified that there was no single government entity responsible for the development of policy for long-term liquid fuel security. In Queensland this has fallen between the cracks of at least nine different ministries and departments.

In August 2006 Brisbane City Council followed suit and established a taskforce that was asked to prepare and respond to climate change, increasing energy use, rising petrol prices and peak oil. These issues are inextricably intertwined, and examining the interconnection is a key focus of the New South Wales taskforce to be established by the Greens bill. The Brisbane City Council Taskforce emphasised the valuable economic opportunities available to those who act decisively in confronting these challenges, for example through developing sustainable industries.

In New South Wales the Greens propose a moratorium on large oil-based infrastructure to be adopted for the period of the work of the taskforce. We put this forward because of the Queensland experience. Although the work of the Queensland Government and the Brisbane City Council has been groundbreaking, the impact has been limited because of ongoing motorway construction projects, which dominate that State's transport plan. Clause 11, if adopted, will put on hold work on such infrastructure—including freeways, tollways, road widenings, bypasses, road lane duplications, multi-level car parks and the like, unless the infrastructure is needed to address a previously identified dangerous road or black spot.

Locking ourselves into petroleum-dependent projects will prove to be a very costly albatross. We must drastically change planning priorities, both of transport planning and road design. The planning is currently done almost entirely without consideration of our dependence on rapidly dwindling supplies of oil. This amendment is critical to the success of the work of the taskforce. Without a moratorium we stand to undermine the very purpose of the Peak Oil Response Plan. This Parliament must recognise its responsibility to prepare New South Wales for oil shortages, and that means we need to start safeguarding our petroleum products while awaiting the findings of the taskforce. To follow through on the work of the taskforce the Greens also propose that the Premier prepare a response to the taskforce's report. This proposal is set out in another Greens amendment, which sets out the need for a coordinated, whole-of-government action plan to mitigate the negative impacts of peak oil on the State and people of New South Wales.

This response must include a specific and coordinated action plan that includes mandatory requirements for each department to set targets for the reduction of fuel use, what measures are needed to meet those targets, and how those measures will be funded. The amendments also provide for a committee of the Legislative Council to be charged with "updating any relevant data, research, reports or other information collected or referred to by the taskforce relating to peak oil, overseeing the implementation of the response plan by each department of the public service, and monitoring the reduction of fuel use by those departments".

The peak oil phenomenon is so serious and so urgent that the response outlined in this bill needs to be ongoing and substantial. That is why there needs to be official oversight, and continual updating. The Peak Oil Response Plan needs teeth, and these amendments provide the means to achieve that. This matter is urgent. We do not have another decade to waste. Ecotransit member Gavin Gatenby, who spoke at a rally to stop the Iron Cove Bridge upgrade, stated, "The decade of peak oil denial has cost Sydney and New South Wales dearly."

The bill is the first legislative response in New South Wales to peak oil. If adopted, it will help stem the costs that Mr Gatenby has identified. It deserves the support of all members of this House. There is no room for institutionalised denial on peak oil. Right now Federal and State governments are exporting this country's last oil and gas. This is irresponsible. The Greens Peak Oil Response Plan Bill, if adopted, will allow New South Wales to give a lead to the rest of the country on this most critical issue.