Darwin – Frack Free Darwin

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Speakers: Belinda Quinlivian and Melissa Bury

Belinda Quinlivian: Thank you. My name's Belinda Quinlivian for Frack Free Darwin.

Melissa Bury: My name is Melissa Bury for Frack Free Darwin.

Hon. Justice Rachel Pepper: Thank you. Yes, when you're ready.

Belinda Quinlivian: I wish to thank Justice Pepper and the panel for their work to date, and for the depth of research that's gone into the interim report, and for the opportunity to speak here today. At the end of the year, this inquiry will conclude and a final report, including your recommendations will be delivered to the NT government. The NT government will then decide the fate of fracking in the territory based on your recommendations. At least, this is my wish. I pray that our government is not unduly influenced by the gas industry, but rather at in best interest of the public to whom the claim to serve, but I fear this may not be the case.

The revolving door of politics is now more active than ever, particularly between Australian politicians and the gas industry. Some examples: Martin Ferguson, former Labour Resources Minister became chairman of Australian Petroleum Production and Exploration of Australia, otherwise known as APPEA six months after leaving politics. His colleagues, Greg Combet, former Minister for Climate Change, and Craig Emerson, Minister for Trade, took on roles as economic consultants to AGL and Santos. John Anderson, former Deputy Prime Minister and leader of the National Party became chairman of the Santos acquired Eastern Star Gas two years after leaving politics. Mark Vale, again, former Deputy Prime Minister and leader of the National Party, became director and then chairman of White Haven Coal. His media advisor was Matthew Doman, now director of APPEA NT.

This list is not restricted to federal politicians. Two of our very own chief ministers have also passed through the revolving door. Adam Giles, Chief Minister from 2013 to 2016, landed a job with Gina Reinhart's Hancock Prospecting. During his time in office, Jacaranda Minerals, a subsidiary of Hancock Prospecting, was granted an exploration licence. Gina publicly described Adam Giles to be her friend. Paul Henderson, former Chief Minister of the NT from 2007 to 2012 also made his way through the

revolving door to become founding partner of Bespoke Territory. Bespoke Territory is directly associated with Bespoke Approach, a lobbying company for Santos, whose directors include former South Australian Premier, John Olsen, and former Federal Labour Senator, Nick Bulkus.

APPEA's own list, according to the article I refer to, which will be included in our written submission, includes no less than 10 previous government employees in varying roles including Communications Director, Principle Media Advisor, Senior Policy Advisor, and Ministerial Advisor. There are another 18 names listed in this article of government employees turned gas industry employees. The revolving door between politics and the gas industry is problematic, and profoundly undermines democracy in this country.

Adding further to the public's distrust of political decision-making is the influence of Australian politics via political donations. The resources industry was the third largest political donor in the 2015/2016 financial year, the property and construction industry coming in first, followed by the big banks/financial insurance industry, coming in second. Until the political donation process is reformed into a fairer system, the purchase of political persuasion will continue to create potential bias between industry and politics.

The third reason for community distrust relates to tax, or rather, lack of tax paid by large firms. The resources in energy industries in the 2014/2015 financial year had the largest proportion of firms paying zero tax, coming in at 60% according to data released by the Australian tax office. This is not to say that there has been illegal activity in the zero tax activities, but it may be more likely that large corporations might be able to afford the best tax lawyers to shift perceived profit to low or no tax jurisdictions.

With the revolving door in full swing, political donations sky high, how are we, the general public, to influence the decision-makers when we must compete with the heavy-leaning influence of the gas industry and their privileged access? How can we feel confident that our elected representatives are looking the public's best interests, and not the industry's or their own? How can we make sure that our voices are heard? There is, as I can see it, an easy solution. Let the people decide. I call upon the panel to include in their recommendations to government in the final report that if onshore, unconventional gas mining is to proceed, then it must be passed by a referendum for democracy's sake. Thank you.

Melissa Bury: Throughout my reading of the interim report put forward by the panel, there were understandably and unexpectedly, a great number of incidences of the word 'mitigate'. Virtually for every risk that was talked about in the report, the perceived solution was to mitigate the risks, or reduce the risks. Before I go any further, I'd like to make it known to the panel that through my role as a volunteer with Frack Free Darwin, I do have, myself, and Belinda, and others, have a good deal of interaction with the public here in the territory, particularly in Darwin. And have what I would fairly confidently

call a clear understanding of the kinds of concerns that Darwinites have around fracking, and also a pretty clear understanding of the general feeling.

In light of that, I might point out that I go some way to speak on behalf of a great number of territorians. The overwhelming sentiment that I get from those people I speak to is that the bottom line is that no amount of regulation, monitoring, and best practise can make hydraulic fracturing safe. There are simply too many things that can go wrong, even when everything is done right and by the book. Even when a robust regulatory framework is in place and adhered to by all parties, there are simply too many things that can go wrong, too many ways in which the environment, particularly our water, can be contaminated.

Water is a finite resource, as we all know. We cannot create rainfall, we cannot replenish our aquifers, so we have a responsibility to care for the water we have, and to make responsible choices about its use and the risks we expose it to. Fracking is an extremely water-intensive process, and I put it to the panel that handing over effectively billions of litres of our precious water to the gas companies, so that they can carry out a practise that puts both underground and surface water at risk of contamination, is not a responsible choice. It needs to be remembered that whether or not to undertake unconventional gas fracking in the NT is a choice. In spite of what industry would have us believe, we do not have a gas shortage crisis here in Australia. This nation is already producing so much gas that we are exporting it overseas. Further, we have other means of producing electricity that are both safer and sustainable.

I'd like to talk for a moment about frack fluids. The interim report states that where adequate toxicological information is available, the chemicals used in fracturing fluid appear to have low toxicity and at the concentrations used would be unlikely to present an acute health risk. I have two concerns here and these are echoed by many people that I hear from. Firstly, there are substantial knowledge gaps with regard to the chemicals used in fracking fluid and further gaps in knowledge about the human health risks posed by those chemicals. While industry, again, is keen to point out that chemical additives make up less than 2% of fracturing fluids, this nevertheless translates into large quantities of chemicals. If the chemicals constitute just .5% of the fracking fluid, then in the fracturing of a typical shale gas well in the U.S., about 75,000 litres of chemical, or two road tanker loads, will be used.

Because of these huge quantities of chemicals, the problem of nondisclosure of the exact chemicals being used by industry becomes a real issue. From a risk management perspective, it is difficult for regulators to assess the risks posed by chemical additives if it is not known what those chemicals are. Even if those chemicals were forcibly disclosed, with a great number of those chemicals, there is no reliable information about their long-term health effects on humans anyway. If that is not a large knowledge gap, then I'm not sure what is.

I also have concerns about being reassured that the chemicals we do know about pose no acute health risk to humans. As I pointed out in my earlier submission to the panel, earlier this year, the sort of health effects that can occur as a result of exposure to those chemicals used in fracking, and importantly to mixtures of those chemicals include effects on the immune system, the nervous system, liver and kidney toxicity, reproductive issues, cancers, respiratory and cardiovascular illnesses, and psychological effects. Whether these health effects are acute or chronic, they are substantial health effects, and that should be considered unacceptable.

There are studies that suggest that people may be exposed to these hazards through contaminated land from chemical spill or inappropriate disposal of wastes, through contaminated surface and ground water supplies, or through pollutions in the air from fugitive emissions, dust from contaminated land, the operation of machinery, and the evaporation of produced water in holding ponds. It has been established in addition to the toxic chemicals found in fracking fluid the produced water that returns to the surface after the well has been drilled includes contaminants that occur naturally underground, but can be harmful to human health. Because many new wells are required to be drilled to keep unconventional gas fields commercially viable, it is not appropriate to consider the impact of a well in isolation. Rather the impact of large amounts of drilling fluid components across many, many wells within an area needs to be considered in assessments of unconventional gas industry impacts, and I trust this is being done. The cumulative impact must also be considered when assessing any other aspect of fracking and its effects on the environment and the wildlife found in the surrounding areas.

I wish to also remind the panel that the public is very much aware that the gas industry is a short-term prospect that competes with agriculture and tourism, among others, which have a far longer lifespan. One could say an infinite lifespan, provided they are protected. This is something I'm hearing repeatedly in the community.

On the subject of greenhouse gas emissions, the interim report states that noting that there is a great deal of variability in the literature, the panel concluded that the life cycle, greenhouse gas emissions for shale gas generated electricity is less than half the emissions associated with coal generated electricity. Given that we all know that coal is dirty energy, this figure of half is not a figure to be celebrated or held up as a reason for the development of a shale gas industry here. How much greenhouse gas is produced by electricity generated by renewables such as solar and wind power? We should be considering our energy future as a whole. Renewable energy is a viable option here in the territory and nationally, as well as being sustainable for the long term.

In addition to all the other reasons not to go down the road of onshore, unconventional gas, it also makes no economic sense to spend substantial amounts of money investing in a short-term fix, and I use the term 'fix' quite loosely, when the industry at best will only be short-lived. It makes far more

sense on so many levels to invest territory money in a long-term energy source that is healthy, safe, and sustainable into the future.

Just a point of issue that I don't think has been looked at in depth, and forgive me if I'm wrong, is the issue of the substantial increase in traffic that fracking would bring about. A single horizontal shale gas well will use between 11 and 34 million litres of water, depending on which literature you are reading. If this water is to be trucked in from elsewhere, that will equate to roughly 360 to 1,100 truckloads. Times that by just 20 wells, and we're looking at industrial-sized trucks transporting water up to 22,000 times on our roads. This represents a substantial increase in traffic that not only impacts on residents and potentially tourism operators in the area, but also impacts on the level of air pollution in the area. Given that Stuart Highway is currently the only main road that runs through the territory, we would see major impacts on traffic flow, as well as a substantial increase in the level of road maintenance required.

As confirmed in the inquiry's interim report, there are a great number of risks associated with the extraction of onshore, unconventional gas. The very best that we can hope for, should the industry go ahead, is that those risks can be mitigated or reduced by the development and implementation of a robust regulatory framework. Indeed, the only assurance that can be offered to the great many Territorians who are concerned about the very real risks associated with fracking is that there will be more robust regulations, and that adherence to those regulations will be monitored.

The panel has indicated that they intend to consult with the Alberta Energy Regulator in Canada to ascertain the regulatory framework within which the onshore, unconventional gas industry operates there, effectively looking to Alberta as an example of best practise. Of course, my first thought upon reading this was, is the onshore, unconventional gas industry operating safely in Alberta? Unfortunately, the answer is no. According to a recent United Nations environment programme report, of 316,000 wells analysed in Alberta, 4.6% had leaks. That equates to 14,536 leaking wells, and this is in a province that is considered to be operating within a robust regulatory framework. If this is the very best level of risk mitigation that we can hope for, it provides very little reassurance.

May I say to the panel that I think it is commendable that you will travel to Queensland to visit CSG Operations there, but it is of concern to many territorians who have spoken to me and have read your interim summary that there is no mention of consulting with communities and landholders in that state. Further, I wonder who will be your guide on those visits to CSG Operations. Will it be a representative of the gas industry, a representative of the government, and who else will be present to qualify any potentially misleading claims and ensure that an accurate picture is being presented?

Can I finish by saying that the great majority of territorians, the very people who would bear the risks of an onshore gas fracking industry in the territory do not consider that the limited benefits outweigh the substantial risks?

Furthermore, territorians by and large do not consider the mitigation of those risks to be sufficient cause for the industry to go ahead. Nowhere has it been demonstrated that any amount of regulation, monitoring, and best practise, however robust, consistent, and wide-reaching can make hydraulic fracturing safe. Thank you.

Hon. Justice Rachel Pepper: Thank you very much. Just to correct a few things, in terms of Queensland, we have already been.

Melissa Bury: So, you have been?

Hon. Justice Rachel Pepper: We have consulted with landholders in Chinchilla, Miles, Roma, Dalby.

Melissa Bury: You've consulted with landholders?

Hon. Justice Rachel Pepper: We have.

Melissa Bury: Great.

Hon. Justice Rachel Pepper: On both sides of the equation. We did tour gas fields in ... Santos gas fields. Because they're Santos-owned gas fields, or at least operated gas fields, obviously that had to be done on auspice by Santos, but we certainly have had consultations with landholders, consultations with various government regulators, as well, and indeed various government departments. We have met with the Coal Seam Gas Centre at UQ. We have spent all last week consulting with people in Queensland.

Melissa Bury: Great. Terrific. That's good to hear.

Hon. Justice Rachel Pepper: With respect to the comments about Alberta, the purpose of that consultation is as set out at section 15.3 on page 128 of the interim report. It wasn't necessarily to certainly nowhere there have we indicated that Alberta is best practise, but rather the purpose of the consultation will be to see what there are, and if there is anything there that can be, to use the words, appropriately adapted and applied in the Northern Territory. Those are the two comments I wish to make.

In terms of traffic, that was interesting what you said about traffic. Where did you get your figures from that you quoted? Are you going to provide a copy of the figures?

Melissa Bury: Yes.

Hon. Justice Rachel Pepper: Oh, excellent. And has that got footnotes there?

Melissa Bury: Absolutely. Yes.

Hon. Justice Rachel Pepper: Excellent.

Melissa Bury: That will be provided.

Hon. Justice Rachel Pepper: I won't bother you again on that. Thank you.

Melissa Bury: Thank you.

Melissa Bury: Any further questions.

Hon. Justice Rachel Pepper: Yes. Dr. Jones.

Dr David Jones: You use the term safe a number of times, and I'd just like to tease out a bit more what in your mind or our community's mind is considered to be safe, given that we work and live in an environment, which is not intrinsically completely safe. We're all exposed to certain dynamics of risk. I think it's an important concept, and maybe you could share your feelings with us.

Melissa Bury: Yeah. I guess when we talk about safe, we're talking about not exposing ourselves or our environment or our resources to unnecessary risk. Obviously, within modern life, there are many risks that cannot be avoided. That's just the nature of modern life. What overwhelmingly I'm hearing from the public is that it doesn't make sense for us to go ahead and embark upon an industry that has such inherent risks and so many of them when it's not imperative that we do so, and we have other options.

Dr David Jones: Particularly what you're saying is that society doesn't perceive that the benefits outweigh the risks.

Melissa Bury: No.

Dr David Jones: Involving in that.

Melissa Bury: No, no, no. Absolutely. That's the overwhelming sentiment that I hear from the majority of public that I speak with. Yes. That there is not enough benefit to make the risks worthwhile and also that what is at stake is so fundamental to so much of what we value here in the territory.

Hon. Justice Rachel Pepper: Anyone else? ...

Professor Brian Priestly: You made a number of comments about the chemicals that are used in fracking fluids, and also important is that we recognise the chemicals that may come up with the produced water ... origin. You've emphasised the toxicity of those chemicals, and at the beginning of the chapter, we pointed

out that at least some of them are known to have low toxicity. What you have not commented on is the other element of health risk assessment, which is the exposure pathways. In that chapter on public health, I think we've tried to emphasise the importance of doing site-specific health risk assessments, which would assess the potential pathways for exposure, where there may be people who would be at the end of those exposure pathways. That, I think, is the other element of health risk assessment that you haven't really addressed I think, in your comments. Is that a fair statement?

Melissa Bury: I guess I'm not able to cover everything, but ... The risks that are presented by the chemicals that are being used are, in many cases, quite substantial risks, as I've pointed out. Dependent upon, obviously, where the fracking would take place for it to go ahead, the likelihood of those risks are bearing fruit with people living in the surrounding areas. It is obviously dependent upon where it takes place.

I guess a question with that too is ... how much risk is acceptable? You know? How much risk is acceptable? I think there was a section where we talked about a .8 kilometre radius or something. I remember the figure of .8. In your summary, there was talk about there being a low-risk outside of a particular radius. I think it begs the question who decides what is an acceptable risk. Who decides? What is the process that they go through in order to make those decisions about what is acceptable and what's not?

Professor Brian Priestly: The issue of acceptability of risk is a thorny one. It's one we're grappling with. In relation to that study that I think you are referring to, it was done with a conventional risk assessment methodology. Looking at the level of exposure inside and outside a particular radius that you mentioned, I think it was .8 kilometres, and the point was made that within the radius of .8 kilometres, you calculate the exposure in comparison to health-based standards. The overall exposure was lower than the health-based standard. If you go outside that radius, then the risk estimate drops even lower. That's the point that I was making, that even with toxic chemicals, there is virtually no risk if there is no exposure.

Melissa Bury: Yeah, and I guess we're talking only about human risk in that instance too, now aren't we?

Professor Brian Priestly: Correct. Yes. That's a very important point to make.

Melissa Bury: Thank you.

Hon. Justice Rachel Pepper: Dr Andersen. Yes.

Dr Alan Andersen: Ms. Bury, I wanted to follow up on your comment how there's a widespread perception among the public that the risks just outweigh the benefits, or at

least the other way around. Benefits are not worth the risks. I just wanted to ask, from your perspective, what would the benefits need to be do you think, in order to outweigh the risks?

Melissa Bury: That's ... I don't know that, given the great number of risks, and the great number of ways in which those risks can be realised, and the fact that there is, so far, no widespread fracking operation anywhere in the world that I've heard about where these risks don't bear fruit, it's very hard to say that anything would make it worthwhile for us to bear these risks. To go ahead with an industry that is this inherently risky. I mean, the bottom line is we're talking about ... contamination of water, primarily. Contamination of land and the effects on human health and the environment. These are really big issues. These are fundamental issues, and I don't know, looking at a big picture of this, I don't know what it is that could possibly make risking our very water and our environment worthwhile.

Do you have anything to add to that?

Hon. Justice Rachel Pepper: Sorry. Dr Beck.

Dr Vaughan Beck AM: I was just going to pick up on the point that you were discussing in relation to the comparison between gas and coal. You made some observation about that in the context of renewables. The report does make that comparison, and it does note that the emissions from gas fire generation is approximately half that from coal fire generations. That is in the report, and you acknowledged that too. Just looking forward, I think most of us would aspire to a carbon-free world, but we are in a transition. We are in the process of finding that some coal fire generation plants are closing, and at the moment, the industry doesn't seem to be replacing them with additional coal fire power stations.

So, there is that movement to renewables with wind and solar, but as we found, for example in South Australia, there are concerns about the security and reliability. There's the need to balance the intermittency with alternative sources to smooth out the fluctuations and attempts the stage we've made of that in terms of the Tesla factories and so forth. In the Finkel report that has done a very comprehensive review on the future of the national energy market out to the mid-30's and into the 50's, it's noting that gas in some ways is there. It is in the process of producing electricity, but it's more in the support role, an increasing support role, for renewables to come in and take on a peaking role when the renewables are there either for availability or similar reasons.

Gas is seen to be supporting the further introduction of renewables because renewables are certainly coming down, but in order to get to that aspirational goal of no carbon emissions, we also have to back that up with factories. That combination is expensive at the moment, and so there is that transitional phase that we're moving in and Finkel report does acknowledge

that and tries to quantify it, so gas is in some ways seen to be supporting the renewables in this transition phase.

Melissa Bury: Yeah, in response to the teething problems that have gone in South Australia with solar power, I think obviously, this technology is fairly new, and there are going to be teething problems. The more that we invest in it, the more that we use it, the more that we will learn about it and come across solutions to those issues. Of course, the more widespread the use of that energy, or that energy source becomes, as with anything, the prices will come down. The expense of it will come down, and I just feel as though ... If we were to not introduce yet another source of gas through gas extraction in the territory, we would increase the incentive for us to move more quickly into developing and fine tuning these renewable energies.

I think as it stands now, if we feel like we can rely on gas for quite some time into the future while we do a little bit of research and a little bit of investment into renewables, it's going to be a very long, very slow process. I'm not an expert on renewables, but I know that there is the technology is available, and it's being used in other areas of the world, and quite effectively. I think there seems to be a lack of interest, and a lack of funding, and a lack of dedication to developing the industry here. I think that's a real shame, and I think the gas industry has a part to play in that.

Belinda Quinlivian: If I may just add, there's also offshore gas, which we have no issue with at all. There's, I think, a contract ... until 2032. Surely that gives enough time for renewables to, at the rate at which they're moving, come to the fore ... capacity.

Dr Vaughan Beck AM: I just accept what you say. Just note that in the Finkel report, they have been effectively, they say technology agnostic because they've certainly taken into account the cost reduction, price reduction associated with renewables and various forms of storage. They've looked at that, and put that into their modelling exercise, and they do note that there is a reduction of gas for electricity production over time. That's one part of the equation. There are other industries that rely very heavily on gas for heating and processing, and they are some serious issues at the moment in terms of a cost and availability of gas to support those so-called manufacturing industries. There is two components. There is the electricity generation. There's also the manufacturing ear, so I accept what you say, but we've also got other dimensions to the problem.

Hon. Justice Rachel Pepper: I note the time, so we'll have to leave it there. Thank you very much, Miss Quinlivian and Miss Bury for your presentation today. Thank you.

Belinda Quinlivian: Thank you.

Melissa Bury: Thank you very much.