



Alice Springs - Rosalie Schultz

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Alice Springs Convention Centre

Speaker: Rosalie Schultz

Hon. Justice Pepper Good Afternoon. If you could please state your name for the recording and if you're appearing on behalf of an organisation the organisation or just your name will do. Thank you.

Rosalie Schultz: Okay, thank you. My name is Rosalie Schultz. I'm here on behalf of Doctors for the Environment Australia, which is a national organisation of medical doctors of all specialties. I'd like to acknowledge the traditional owners of the lands that we're on. I thank you very much for considering my feedback and this further submission following the release of the draft final report and I want to say how impressed I am with how comprehensive and clearly laid out it is and the extended consultation and all the work you've done. But there's four more issues that I'd like to address in this final submission.

First is corporate social responsibility and the role of the community and community education and awareness. I'd like to talk briefly about the other Inquiries that you flagged on the website. I'd like to talk about climate change, which is the main risk to public health in the 21st century and finally, I'd like to talk about economics and opportunity costs from fracking. Each of these points leads to the recommendation that the moratorium on fracking should be extended indefinitely.

Overall from my experience and research and observation of the reporting and reading of the submissions and the social and health benefits of fracking. I think that the moratorium should be extended indefinitely. We see that there's some disconnect between what the reporting of the fracking ... the Inquiry out there and then your own reports. In particular, this opinion that provided the recommendations are adopted and implemented, not only can the risk be minimised it can be eliminated altogether.

Hon. Justice Pepper In some instances.

Rosalie Schultz: In some instances.

Hon. Justice Pepper Thank you.

Rosalie Schultz: This is the reporting that we see ... the community doesn't feel that from the reporting that we see and the way the communities reacted. I guess the question is what's going on? How can we, the community, and the media be



so wrong when this is what you're reporting? I wonder whether the panel believes the community is ignorant or risk-averse, or we're emotional or whether we're just wrong?

Just looking at the terms of reference of the inquiring, to assist the scientific evidence to determine the nature and extent of the risks particularly to the environment. Then in the environment, it includes, in fact, the well-being of humans and the amenity values of the area. I think that that environment in some way includes the social licence. I think that question of social licence requires more attention to explain the difference between the community, which living here there is no social licence and yet the apparent recommendation that fracking can be made safe. I think that the scientific evidence that seems to be in the report has focused on quantitative evidence and there is a lot of qualitative evidence that is in and around the community that seems to have been overlooked.

Just got to go back to this ... Well, maybe it's not in this version ... This picture of us ... the big rally that we had. Oh, there were are. In the media there was this question of, have you looked at the portion of submissions for and against fracking and the response was, "No." But we did our own survey and you can see the result there that 89% of the people wanted no fracking.

Then going on to my second point, which is about the other inquiries, that very helpfully, the website drew our attention to with a single click. The Victorian and South Australia inquiries that both led to indefinite moratoriums, or bans, on fracking.

Hon. Justice Pepper

South Australia, that's not right.

Rosalie Schultz:

And the South Australia Inquiry in particular talking about there was no social licence and so fracking should not go ahead.

Hon. Justice Pepper

That's an Inquiry in the Southeast [crosstalk] Australia.

Rosalie Schultz:

That's correct.

Hon. Justice Pepper

They still very much frack in South Australia.

Rosalie Schultz:

Yes, yes. But what's interesting is both Victoria and South Australia are now really doing so well with renewable energy. Victoria's building the biggest wind farm in the world and a stockyard and South Australia has just installed the biggest battery in the world and I'm making the connection but maybe this sense that the community doesn't want fracking. What does the community want? The community wants renewable energy and by reducing the investment in fracking we can move on to renewable energy, which is really the future of the energy and the economy.

Meanwhile, WA and Northern Territory have inquiries in 2015 and we're having inquiries now because both of these inquiries concluded that fracking could be appropriately regulated and the people didn't like that. The people



don't think it can be appropriately regulated and so both WA and Northern Territory are now having more inquiries and so both states have ... both WA, they've put a moratorium and they're doing an Inquiry and exactly the same here. So I think the point I'm making is that an Inquiry that leads to an indefinite moratorium, or a ban, goes somewhere; you go to renewable energy. An Inquiry that includes that it can be regulated goes to unhappiness and another Inquiry.

My third point is about climate change, which is recognised as the most serious threat to public health of the 21st century. This is from The Lancet, which has launched a commission on climate change. Their most recent report talks about 25 years of not really doing anything but at least there's some action now. I guess talking about the northern territory we're seeing higher temperatures, we're seeing in Darwin the effects of storm surges and sea level rise and the erosion of the waterways. You just need to stay in a hotel up there and you can see how that coast line's being eroded. We're seeing inland flooding and inundation, you can actually look at the newspaper any day of the week and see extreme weather events; the early impacts of climate change.

Climate change is discussed in quite a lot of detail in the section of the draft report on greenhouse gas emissions but it's not discussed under cumulative impacts, it's not discussed under public health, it's not discussed under land and water. For example, recommendation 8.4 talks about fire regimes and how the fire management plan should address the impact of onshore shale gas on fire regimes but doesn't actually talk about fire regimes are going to be changing with climate change. Climate change has got to impact all aspects of our lives and the environment, and so it needs to be mentioned in all sections of the report not just in the section on greenhouse gases.

When you do talk about climate change it talks about how we can actually ... actually gas is good for climate change because it reduces ... it means there's less coal to be burnt. I have found this recent article from the journal Nature, a very leading journal globally, which talks about how in fact despite the massive increase, in gas production it's not having the impact it expected on climate change.

And I've got my slides out of order slightly. I've just read a section there, which I was going to read.

Hon. Justice Pepper

It's alright.

Rosalie Schultz:

This is from a series of articles, which talk about the most important energy development in the last decade had been the wide deployment of fracking technologies that enabled the production of previously uneconomic shale gas resources in North America. Some researchers have observed abundant natural gas substituting from coal could reduce CO₂ emissions. However, assessment of the full impact of abundant gas on climate change requires an integrated approach to the global energy economy climate systems but the literature to date has been limited in either its scope or its coverage of greenhouse gas emissions. Here we show that market-driven increases in



global supplies of unconventional natural gas do not discernibly reduce the trajectory of greenhouse gas emissions on climate forcing.

This slide talks about our results based on simulations from state-of-the-art integrated assessment models of energy economy climate systems independently forced but an abundant gas scenario, project large natural gas consumptions but the impact on carbon dioxide emissions is found to be small from -2 to 11%. The majority of models report an increase in climate forcing. This contradicts the Finkel report that you've quoted in the draft final report. What Finkel says is that access to gas is in the interest of all Australians because of its raw and supporting the deployment of renewable technologies. And you say, over the longer term Australia transitions to lower emissions generation natural gas may be replaced by zero emissions fuel such as hydrogen and biogas. I would argue that in fact, the boom in unconventional gas is holding back the transition to renewable energies and all the investment is going to gas and hydraulic fracking sidestepping where we need to be, which is into renewable energies because of the urgency of reducing greenhouse gas emissions because of climate change.

This side I've highlighted where you said greenhouse gas emissions from any new shale gas in the NT must report negligible impact on climate warming and here you even define a negligible impact, which is a very low proportion at 0.05%, which is equal to 5 in 10,000 of global emissions is from us, which is really a gross injustice when 200,000 people in the Northern Territory, assuming we all benefit, are going to be producing .5% of global emissions from fracking that's about 17 times our share in a global population of 7 billion people.

Hon. Justice Pepper You said .5, I think you mean .05.

Rosalie Schultz: Point zero five, five in 10,000 whereas we're .0029% of the 7 billion people in the world. So there's a bit of an injustice that 200,000 people in the territory-

Hon. Justice Pepper: I understand the point. It was just you misquoted the figure.

Rosalie Schultz: Okay .05, five in 10,000 versus-

Hon. Justice Pepper: You said 0.5 as opposed to 0.05.

Rosalie Schultz: Yep. I'm nervous. Okay, this is another paper addressing the same issue. A more recent paper from the journal Nature, which talks about we actually need to not explore it; fossil fuels. They're actually talking about known resources of fossil fuels. Three-quarters of which need to remain in the ground. We're talking about unknown fossil fuels that we've still got to explore. There's a quote there I've put in yellow, "Our results show that policy makers instincts to explore it rapidly and completely their territorial fossil fuels are in aggregate inconsistent with their commitments to the two-degree temperature limit." Implementation of this policy commitment would also render unnecessary continued substantial expenditure on fossil



fuel exploration because any new discoveries could not lead to increase aggregate production.

This graph on the right shows the costs of the various fuels that are explored and the column on the far right is shale gas which is the most expensive of the possible options for burning fossil fuels that are available already explored and in reserves. Let alone our own resources that haven't been explored under a new technology. So the entire project of inquiring into development of policy into fracking is both unnecessary and a detraction and opportunity costs for energy and economic progress. We need to stop burning fossil fuels. It's fundamentally in contradiction to our obligations to the Paris Commitment to keep average global temperature increase below two degrees.

This links back to the Inquiry is in other states where bans on fracking have led to a recognition of the injustice of investment in fracking. It's not what the community wants and the community's concerned about the climate.

I'll just move on briefly, and I'm a little bit out of my depth talking about economic analysis but I did notice they use these scenarios of calm breeze, wind, and gale for the levels of unconventional gas and I thought that was rather ironic as if we are looking at wind energy. We're in fact looking at gas and maybe better terms would have been whiff, smell, stench, and asphyxia. They're distracting us. This is about gas, it's not about wind.

The other issue is the jobs whereas the renewable energies are a fantastic source of jobs this is from a paper from Green Energy, which talks about employment in renewable energy and you can see the fantastic employment opportunities from renewable energy. There's Victoria, which is just stepping out because of this great new wind farm that they're building. We also see the declining price of particularly solar but also wind energy, and I just note how even during the period this Inquiry's been in place the price of solar has plummeted making renewable energies such an opportunity and here we are talking about gas. Its renewable energy where we need to be looking for as safe clean future.

Just on the public health aspect, I'll just quote from my college GERALYN McCARRON in Queensland where she says in very strong language, "I cannot express enough my disappointment regarding the current recommendations about baseline studies." Fifteen point one says without an adequate pre disturbance baseline the magnitude of any post-development change cannot be effectively predicted. We're talking about pre-development and post-development but in fact that's after exploration and so really the pre-development baseline should be prior to exploration not prior to production and she points out that it's not even production it's actually ... the production licence has already been granted before we need to do this baseline and ultimately a baseline should be before there's any disturbance. There's no recommendations for any of the air toxins such as BTEX, nitrous oxides, VOCs, and formaldehyde so these baselines on methane. Fantastic, that'll get us over those issues with gas being bubbled through the condom



on river. At least if we do a baseline we'll know how much gas is there but not these other compounds.

I'm also concerned about the one year period given the extreme variability in climate and other factors in the territory from year to year. We know that rainfall, in particularly the arid region, is hugely variable from year to year and to be doing a baseline survey for 12 months kind of misses the point when we should be looking over a decade and even a decade doesn't quite account for the extreme rainfall and other environmental variability from year to year.

The other public health issues is the baseline data on frequency and duration of symptoms associated with irritant substances such as sore eyes, respiratory irritation, and asthma. But this too should be done before exploration not just before production. It's a bit worrying the recommendations seem to be that's after exploration when already we might be having an elevation in baseline effects. I'm also concerned about what the community feels when there is this increasing concern about surveillance of us and of our health conditions and what would happen if the fact the I've got asthma got released to insurance companies if there's going to be some kind of enforced health surveillance before fracking, whether the public might actually not want to engage with that. So, that's putting that tension, which doesn't need to be there. We just don't need fracking.

In summary, I've presented further cases that fracking should have an indefinite moratorium, the community concern, the issues about climate change and our obligations to keep even known reserves in the ground let alone exploring for new reserves of a new type of gas, the economic analysis and the lost opportunities for investment in fracking, and public health issues with the proper baseline needed of methane and other chemicals and the baseline evaluation the community before anything goes ahead not just before production. On behalf of DEA we just want to recommend that the moratorium be extended indefinitely for the multitude of risks. Thank you.

- Hon. Justice Pepper Thank you very much Dr. Schultz. Your slides and your document will be provided to the Inquiry as a submission.
- Rosalie Schultz: I've also got these ones about...
- Hon. Justice Pepper Absolutely. Please what we'll do just attach those to the slides and the paper and together as a package it'll be a submission if you are content with that process.
- Rosalie Schultz: Yep. Thank you.
- Hon. Justice Pepper Thank you. Alright. Any questions? Yes, Dr. Jones.
- Dr. David Jones: Dr. Schultz, I noticed your comments about when the health baseline studies should be done and you suggested preferably prior to exploration. To what extent do you think this current situation is causing stress in the



community and in itself is a health-promoting risk? All this is being talked about and it might in itself already be causing an adventitious condition.

Rosalie Schultz: Absolutely. Yes. I really recognise the dilemma we want to talk about these things and come to a sense of scientific agreement that ... what we should be doing ... And yet that does itself cause anxiety and stress.

Dr. David Jones: It's a bit like the Heisenberg uncertainty principle. Isn't it? The closer you try to get to your objective the [crosstalk].

Rosalie Schultz: There's no comparable population. You can't compare people who are going to be involved and aren't going to be involved when we don't really know what we're doing. So I acknowledge that's a difficulty.

Hon. Justice Pepper Any further questions? Yes, Professor Hart.

Prof. Barry Hart: I can reassure you the Water Chapter does have a section on climate change.

Rosalie Schultz: Thank you.

Hon. Justice Pepper Yes, Dr. Anderson.

Dr. Alan Anderson: A comment first and then a question. The comment is in relation to your concern about climate change affecting fire here in the NT. I was part of a research team commissioned by the federal government to report on potential impacts of climate change on fire regimes. Our findings were that it's a very big issue in the eucalypt woodlands and open forest in Southeastern and Southwestern Australia. There's evidence that we're already seeing that. But it's not going to be a big issue here in the NT because of just difference of climate and fuels and things. Just reassure ... on the fire side of things shouldn't be a major impact of climate change.

The question I have relates to the existing gas fields in Mereenie and Palm Valley. I'm just wondering if you've given this much thought on what impacts they might have had on public health and whether there been any studies or any evidence or what sort of consideration there has been on the existing gas fields if any on public health?

Rosalie Schultz: I think it's a good thing. I think that the fact that we in the territory are using conventional gas is a good thing because otherwise we'd be on coal like the other states. So I think that's a good thing. I do acknowledge that gas of itself, and burning it of itself, has a much lower carbon footprint than burning coal. So absolutely that's a good thing. We've got enough gas to last us for many ... hundred years, 200 years as I understand. We don't need unconventional gas for the territory. We've got enough good supplies of conventional gas and the Mereenie, when you see the Aboriginal people out there at Hermannsburg working in that gas field, fantastic. But I think new resources, new technology ... we don't need it. There's a threshold there.



Hon. Justice Pepper A third of Mereenie has been fracked. Does that change your opinion about Mereenie?

Rosalie Schultz: I believe I also it was fracked using older technology that wasn't using the chemicals. It was just using water as I understand.

Hon. Justice Pepper I understand your argument, which is just basically leaving aside what we've got now ... Your quite powerful point is: keep the rest of it in the ground. That's the short answer, isn't it?

Rosalie Schultz: And invest elsewhere. You know there's gas companies who are desperate to go ... that could be putting up solar panels. What's South Australia doing? They're going to get 50,000 people solar panels so the companies have got energy expertise, let's just put it where we need it, which is in renewables. I'm not anti-development. I'm not anti-energy. I'm not anti-that. I just feel like fracking is not the way to go. New fossil fuels are not the way to go and all the energy going that way is lost from progressive energy developments. I guess all the research and all that effort we've put into fracking could've been going on to renewable energy.

Hon. Justice Pepper I understand the submission. Yes, Professor Priestly.

Prof. Brian Priestly: Thank you for pointing out that while greenhouse gas issues were covered in some bit in one of the chapters, it wasn't mentioned as a public health issue in chapter 10, and that will be addressed.

Rosalie Schultz: Thank you.

Hon. Justice Pepper Yes, Dr. Beck.

Dr. Vaughan Beck: Let me just thank you very much for your presentation of material and evidence in relation to greenhouse gases and the implications. I think you've been consistent in that. So I look forward to reading your most recent submission and just to acknowledge that this panel accepts the science of climate change and the need to limit temperate rise for the well-being of the globe.

We face a bit of a dilemma here because we're focusing on one sector of the energy supply; gas. In one territory, Northern Territory. And that's being considered separately in isolation and in part, in ignorance of what's happening nationally and globally, in terms of energy and climate change policy. So that if we're going to be looking at the implications of this we need to be considering it in a broader context because we can't just look at it in isolation. And that's part of the difficulty that we have. We've been asked to look at effectively isolation and in ignorance of what's happening elsewhere. As you well know, Australia's got its obligations under the Paris Accord as has the rest of the globe and so you're trying to achieve those objectives, as is noted in the report will be a challenging task, for individual nations and the globe collectively. But as we move forward, there are other things happening in the energy and climate policy, which are potentially changing our trajectory. And this one ultimately needs to be seen in that



broader context but here we're focusing just on one aspect and it's seemed to be additive not in a broader context where other changes are occurring both from a government policy perspective and also commercial and private initiatives that are going down the renewable path. I just note that in passing.

Rosalie Schultz: I guess...

Hon. Justice Pepper I guess we are saying we have sympathy with what you've put to us. There is a degree of artificiality as there always is when you have a constrained inquiring into a specific topic.

Rosalie Schultz: I think there's some good analogies we can draw with the health field. It's like the person you think saw one cigarettes not going to do me any harm but cigarettes are highly addictive. So it's part of the global picture and by going this direction we say we think it's okay, we say we think our .05% is okay because China's got this many but it's part of the global picture. I think it's part of the research area and the expertise. Again, I think looking at it in isolation is, as you say, artificial but a lost opportunity.

Hon. Justice Pepper That may be an Inquiry for another day. Anything further?

Dr. Schultz, I think this is the fourth time we have met and the third time you've presented to the panel and its quality submission such of yours, which have assisted the work of this Inquiry and has certainly made the job of the panel much easier and we thank you again for your engagement with this Inquiry.

Rosalie Schultz: Well, thank you very much.

Hon. Justice Pepper Thank you.