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Public Engagement and Supporting Nuclear Science and Technology in Australia

- I wish to provide quite a targeted message today and I will confine this presentation to issues surrounding the nuclear fuel cycle. Its become more topical recently for reasons I'll outline in this presentation.
- I'll also reference presentations given at the Canadian Nuclear Association conference 2016 by Malcolm Grimston, Imperial College and Greg Lyle, President, Innovative Research Group.



Public Opinion – We care about public opinion because Governments and Business care

A definition of Public Opinion

“Those opinions held by private persons which governments find prudent to heed”

(V.O. Key, US Political Scientist)

Poor public opinion of an issue leads to the perceived need for public engagement – if only the public could be better informed and educated then the problems could all be resolved and policy could be implemented more effectively.

Often, where entrenched societal values get in the way deliberate steps are taken to mould Public Opinion by propaganda as a means to sidestep honest public engagement.



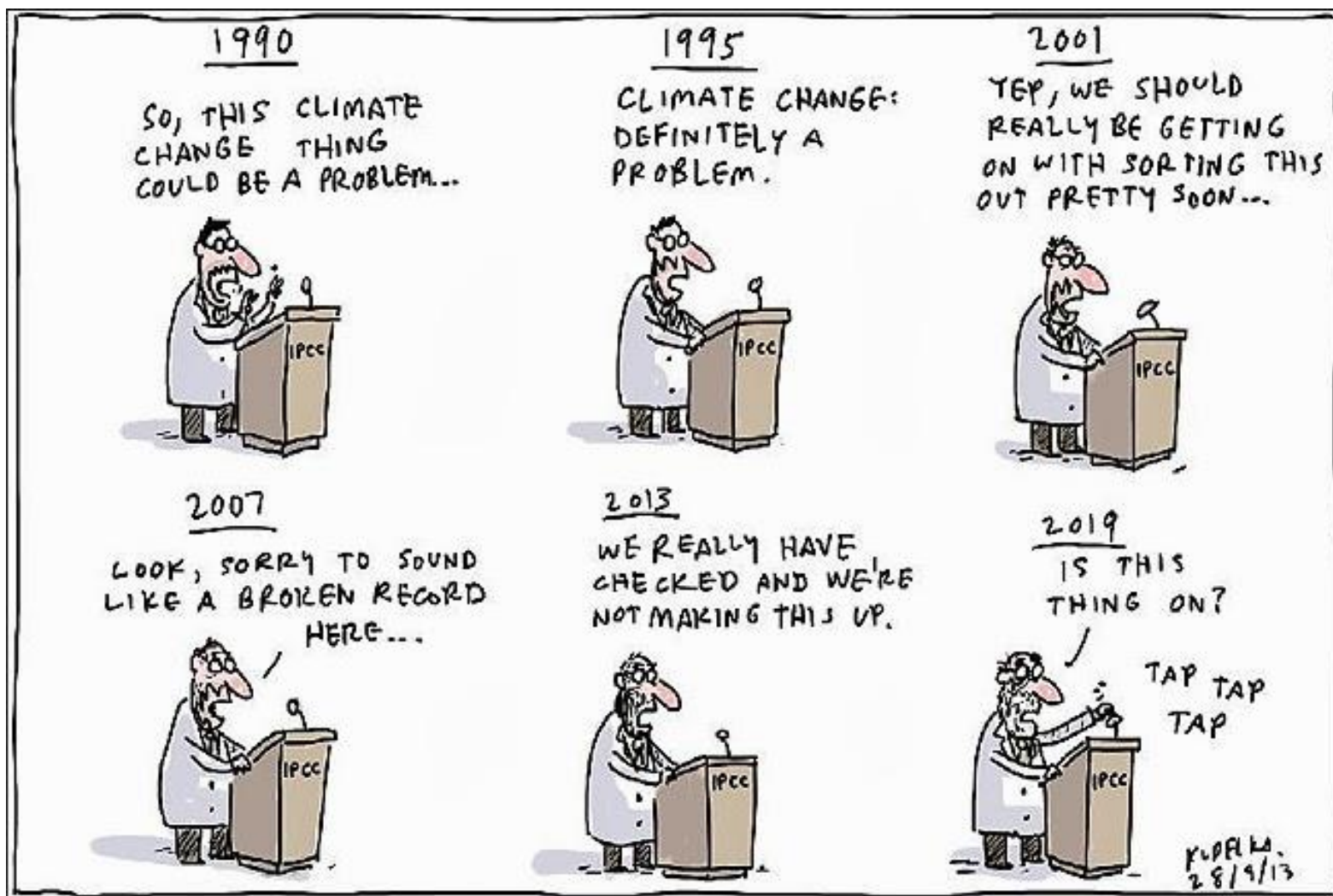
What is Public Engagement?

- **Public engagement** is a term that has recently been used to describe "the involvement of specialists listening to, developing their understanding of, and interacting with, non-specialists" (as defined by England's university funding agency, HEFCE, in 2006)
- There's an underlying hope that through better communication the public's poor understanding and responses to nuclear technology for example can be addressed by better education – if they just listen and understand then everything will be sorted out. This is despite the fact that often the public's position is the result of inconsistent or perverse behaviour on the part of industry or government. The debate over carbon pricing is a great example.
- Scientists, Engineers and Bureaucrats are also very often poor or timid communicators.



Poor Record of Climate Change Communication

It was compromised from the start by “weasel words” that gave business and government a way out.





Our communication skills must vastly improve if we are to address the Growing Focus on Nuclear Issues in Australia

Self Interest - its a sure bet and blunts opposition

- 1. Nuclear Medicine and Industrial applications** – No public concern with actual operations. Self interest factor is high, though unfortunately this does not translate to acceptance of a low or intermediate level waste repository.
- 2. Low and Intermediate Waste Repository** – Hostile response, people in our regional communities are intensely suspicious. If its so safe why locate low level radiation facilities in remote regions? – It only reinforces concerns. Many therefore suggest the ACT as a repository in response.
- 3. High Level Waste Repository** – this facility will result in Australia being fully engaged in the International nuclear fuel cycle. Is there sufficient self interest in the large income and long term jobs to overcome opposition?
- 4. Nuclear Energy** – requires commitment to effective climate change action. Is climate change a sufficient motivator of self interest to overcome opposition and higher costs? Strategic advantage with liquid fuels replaced by electricity may be a large motivator.⁵



The Puzzle

- Why is the safest large-scale energy source regarded as the most dangerous by significant numbers of people to the extent that some countries are terminating its use?
- How did Fukushima, a middle ranking industrial accident of the kind that happens eight or ten times every year somewhere in the world, become a major human tragedy which is still happening?
- How did the food from the Fukushima region suddenly become unsafe at the International limit of 500 Bq per kg and require the limit to be reduced to 100 Bq per kg or about the same intensity as the human body? How can people ever trust the regulators again for allowing us to eat this food?



The Tragedy who has caused this?

- At Three Mile Island, Chernobyl and Fukushima the radiological damage of the radiation was significantly outweighed by the psychological and social damage of the “response” – including the atmosphere created by years of miscommunication and misunderstanding (to the point of irrationality) by the “nuclear family” - i.e. the industry, its regulators and its supporters.
- The effect of the poor response to these incidents has been to stifle to use of the World’s best technology to limit climate change – that’s a tragedy on a vast scale.



Lessons for Engagement 1

1. Don't try to force an interest in nuclear energy down people's throats – the most likely outcome is a growing sense of suspicion and concern. On the other hand respond openly and honestly to people who are interested
2. When people are conflicted you must address the weaknesses of your position as well as your strengths – otherwise they think you are lying.
3. Don't fall for the Big Green myth that they represent anybody but themselves – where they make a good point accept it. Where they do not, don't accept it in order to make yourselves look reasonable.
4. When people forget the problem you are solving you become the problem – continue to stress jobs, economic and environmental benefit.



Lessons for Engagement 2

5. Remember that the case for nuclear power is that the World will be better with more nuclear power than without – not that nuclear is perfect. In particular, the argument for nuclear power is not that it is a bit safer than you thought it was but that we have a desperate need for reliable low-carbon electricity that will limit climate change.
6. Nuclear going wrong is better than coal going right
7. To know nuclear is to trust nuclear – invest in the education of the young.
8. Better Communication – e.g. Not banging on so much about safety – would put nuclear power into a proper perspective.
9. While the industry and regulators continue to do the types of inconsistent things that happened with the Fukushima response and treat nuclear power and radiation as if they are vastly more dangerous than they actually are – in the bizarre hope that this will put people's minds at rest rather than inevitably doing precisely the opposite – then only truly irrational members of the public will be convinced.

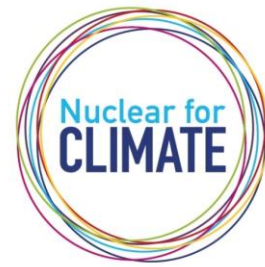


The Message

- We Scientists and Engineers are the professionals with the tools to be creative and original.
- Too often we surrender leadership to the journalists, lawyers, economists and political staffers who come up with truly mediocre reports that are sanitised for politicians and the media.
- We need to get out of our silos and collectively grab hold of the challenge of providing Australia's low carbon future.
- Proper communication and risk assessment is vital.



Australia's Nuclear For Climate Project



1. This is a new study needing real insights into public engagement and puts climate change mitigation as its central purpose.
2. The study is intended to provide a clear direction for decarbonising sections of Australia's primary energy system. This will be achieved through the use of nuclear energy in **Australia's Nuclear for Climate project**. It will also provide strategic energy security for a major portion of the nation's transport sector.