

# Turbulence Ahead

***A new discussion paper by the Institute shows that we are going to have to drastically re-think the role of aviation in society. Authors Andrew Macintosh and Christian Downie explain why.***

Although aviation's current contribution to global warming is dwarfed by the impact of electricity generation, vehicle emissions and agriculture, it threatens to become a major contributor in the future.

If left unchecked, growth in aviation emissions could derail global efforts to reduce greenhouse gas emissions.

Since the 1950s, the aviation industry has experienced astronomical growth. Between 1960 and the mid-1990s, air passenger traffic grew by almost nine per cent per year, 2.4 times the average growth rate of GDP.

Since that time, the growth rate has been dampened by the East Asian financial crisis, the September 11 attacks and SARS. However, the industry has rebounded strongly, with passenger traffic growing by more than five per cent a year since 2004.



Unless policies are introduced to curb demand, aviation is expected to continue to grow strongly.

Airbus predicts global passenger traffic, boosted by the success of discount airlines, will grow by an average of 4.8 per cent a year between

2006 and 2025. In Australia, domestic and international air passenger numbers are expected to double in the next 15 years. State and federal governments have vigorously supported the expansion of airports and related infrastructure to accommodate the growth in air traffic.

Australians cannot expect to fly more than they currently do today.

Continued growth in the airline industry conflicts with the need to sharply reduce greenhouse gas emissions.

The evidence suggests that, to avoid dangerous climate change, global greenhouse gas emissions will have to be cut by between 25 and 70 per cent on 2005 levels by 2050 and by a higher proportion in developed countries like Australia.

## **Australian growth**

To investigate whether the aviation industry could continue under business-as-usual conditions in a carbon-constrained world, we projected aviation emissions from 2005 to 2050 and compared the results to 60 per cent and 80 per cent emission reduction targets.

In projecting emissions, we had to account for the uncertainties associated with the impacts of the different gases emitted by aircraft.

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## **Turbulence ahead**

*Andrew Macintosh and Christian Downie*

## **Universities and fossil fuel capture**

*Christian Downie*

## **Silencing dissent: The Federal Government strikes**

*James Arvanitakis*

## **Grassroots campaign against sexualisation of children**

*Julie Gale*

## **See Paris and Die?**

*Steve Biddulph*

## **Academic economists call for Kyoto ratification**

*Clive Hamilton*

## **Insuring against catastrophic change**

*Peter Dixon and Philip Adams*

## **The Australian gets shifty on nukes**

*Andrew Macintosh*

## **Which greenhouse strategy do you prefer?**

*Andrew Macintosh*

## **Aviation report sparks strong reactions**

## **Institute Notes**

The three main aviation emissions are carbon dioxide (CO<sub>2</sub>), nitrogen oxides and water vapour. CO<sub>2</sub> is a direct greenhouse gas that mixes well in the atmosphere and its impacts on the climate are relatively well-understood.

However, non-CO<sub>2</sub> emissions are not so well-understood. Most non-CO<sub>2</sub> aviation emissions have short atmospheric lifetimes and their impacts vary depending on when and where they are released. There is also uncertainty about the nature of the atmospheric effects of non-CO<sub>2</sub> aviation emissions.

Due to these uncertainties, it is very difficult to measure their impacts and to compare them to CO<sub>2</sub> and other direct greenhouse gases.

**Uplift factors**

As a result, non-CO<sub>2</sub> aviation emissions are generally excluded from national totals in reports prepared under the United Nations Framework Convention on Climate Change. Non-CO<sub>2</sub> aviation emissions are also excluded from the targets under the Kyoto Protocol.

To account for the impacts of non-CO<sub>2</sub> emissions, ‘uplift factors’ are sometimes used. CO<sub>2</sub> emissions from aviation are multiplied by the relevant uplift factor to provide an estimate of total aviation emissions.

The use of uplift factors is controversial because of the uncertainties associated with non-CO<sub>2</sub> aviation emissions.

Aviation could account for more than Australia’s entire emission allowance at 2050.

However, there is a consensus that the impacts of aviation are substantially greater than suggested by measurements based solely on emissions of the direct greenhouse gases included in the national totals under the UNFCCC/Kyoto regime.

Our projections used three main scenarios: two with uplift factors (US1 and US2) and one without (NU1). The results are shown in the figure.

It is apparent that, if the Australian aviation sector is allowed to continue to operate under business-as-usual conditions and the Federal Government adopts a target of reducing emissions to 60 per cent below 2000 levels by the middle of this century, aviation could account for between 32 and 51 per cent of the total greenhouse gas allowance by 2050.

If the reduction target is set at 80 per cent below 2000 levels by 2050, aviation could account for more than Australia’s entire emission allowance at 2050.

**No techno-fix**

Unlike many other emission-intensive industries where technologies to cut emissions are available or anticipated, no technological options to substantially reduce aviation emissions are on the horizon.

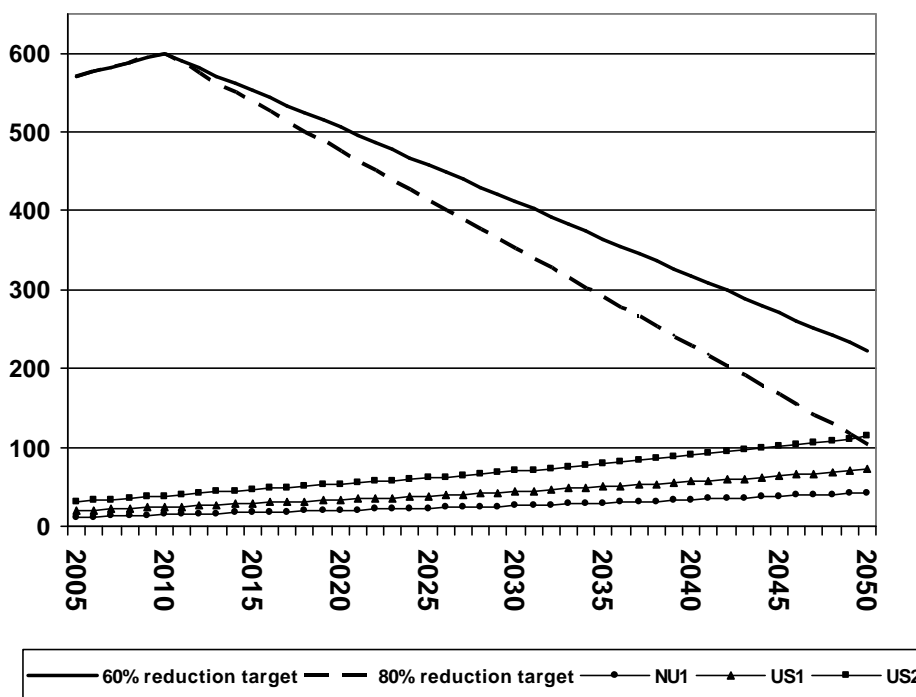
And even if unforeseen technological solutions emerge, it will take decades for them to be implemented. As a result, reducing aviation’s impact on the climate requires a constraint to be put on demand. In short, we are going to have to fly less.

From the outset, the introduction of an emissions trading scheme in Australia should include CO<sub>2</sub> emissions from aviation, as well as the imposition of a mandatory change on non-CO<sub>2</sub> aviation emissions.

These market mechanisms should also be complemented with more direct intervention including performance standards for new aircraft.

The investment saved from restrictions on the expansion of the aviation industry will need to be redirected into alternative modes of transport, including high-speed rail, and telecommunications infrastructure.

**Greenhouse gas emissions under various scenarios in Mt**



Irrespective of which policy instruments are implemented to curtail aviation emissions, Australians cannot expect to fly more than they currently do today.

Unless there is a major technological breakthrough presently not foreseeable, the amount of air travel will need to be stabilised and ultimately reduced.

We recognise that these proposals are likely to elicit howls of protest from the aviation industry, and dismissive comments from government, but here as in Europe the facts point to one conclusion only - we must cut back on the amount of flying if we are to tackle climate change.

# Universities and fossil fuel capture

***Is there a problem with the University of Queensland having the Xstrata Chair of Metallurgical Engineering or Curtin University having the Woodside Hydrocarbon Research Facility? These questions are explored in a new Institute discussion paper. Co-author Christian Downie explains.***

Over the last decade the fossil fuel industries have become steadily more involved in Australian universities.

Fossil fuel industry associations and fossil fuel companies have spent millions of dollars funding research projects and sponsoring university chairs, academic posts and even entire schools.

## **Are Australian universities captured?**

But is this a problem? Are Australian universities being 'captured'? Are fossil fuel companies gaining an inappropriate level of influence over the teaching and research priorities of universities? Is academic freedom in jeopardy?

The increasing close relationships between Australian universities and the fossil fuel industries are evident from a few examples.

The concern is that academics may refrain from making critical remarks about the practices of companies.

The School of Engineering at the University of Queensland hosts the Xstrata Chair of Metallurgical Engineering, the BHP Billiton Mitsubishi Alliance Chair of Mining Engineering, the BHP Billiton Mitsubishi Alliance Chair of Minerals Processing and the Chair of Mining Safety founded by Rio Tinto and other fossil fuel companies.

Many of these chairs are used by the fossil fuel companies to 'oversee and guide' the degree structures and course materials.

Moreover, it is largely the same companies that fund some of the research projects undertaken in the School and its associated research centres.



In Western Australia, relationships between universities and the fossil fuel industries are dominated by oil and gas companies.

The Chancellors of both the University of Western Australia and Curtin University are current directors of major oil and gas companies, Woodside and Coogee Resources.

In fact, Woodside is a major sponsor of the School of Oil and Gas Engineering at the University of Western Australia.

It established the School in 2000 with a \$1 million grant and it has provided almost \$2 million to create two chairs. Woodside personnel sit on the University advisory boards, committees and many have participated in the School's teaching and research programs.

Woodside is also prominent at Curtin University. Curtin is home to the Woodside Hydrocarbon Research Facility and the Chair of Hydrocarbon Research both funded by Woodside. It is also the location for the Western Australian Energy Research Alliance, a joint venture funded in part by Woodside and Chevron Texaco.

Woodside's funding of the Hydrocarbon Research Facility was criticised in 2005 after it was revealed in the press that the University made a \$20,000 donation to the Kurdistan Regional Government in Iraq on behalf of Woodside.

## **Academic freedom**

The extent of these relationships raises particular concerns for teaching

and research at Australian universities.

For teaching the concern is that industry's preference for flexible and targeted degrees and courses will lead to curriculums increasingly tailored to the short-term needs of industry, which may narrow the education received by students.

For example, the sponsorship of some university chairs and academic posts has been used to oversee the development of degree structures and course content.

Applied research in the private interest could crowd out basic research in the public interest.

Further, evidence from the University of Western Australia indicates that fossil fuel sponsors 'approved the rationale for restructure' of the undergraduate program at the School of Oil and Gas Engineering.

In 2005, the School estimated that about 70 industry representatives had been involved in the development, coordination and teaching of oil and gas units at an estimated cost of \$600,000 to industry per year.

One of the roles of university lecturers and researchers in mining and engineering schools is to use their expertise to assess and comment on the practices of industry.

The concern is that academics may refrain from making critical remarks to their students, governments or the public about the practices of companies or industries with which they or their university have a financial association.

Indeed in 2005 the administration at Curtin University 'expressed their unhappiness' when a professor at the

*Continued on page 4*

university spoke publicly about Alcoa's funding of the Alcoa Research Centre For Stronger Communities at the University, at the same time as the company was being criticised in the media over pollution from one of its plants damaging the health of a local community.

In the case of research, the primary concern is that short-term applied research in the private interest could crowd out basic research in the public interest.

Basic research is important because it provides the foundation for scientific advancement and training and acts as the body of scientific knowledge that underpins more applied research.

However, a number of the schools and centres with ties to the fossil fuel industry are heavily geared towards short-term research for the sponsoring industry or company.

For example, the Sustainable Minerals Institute at the University of Queensland states that its business 'is research for, and in the closest possible association with, the minerals industry'.

As far back as 1996, a researcher at another centre at the University of Queensland claimed that 'part of the attraction for the companies is that they have a very big say on how we conduct our research'.

Several academics have pointed out that the key challenge is finding research problems the fossil fuel industries view as worthwhile and therefore are likely to fund.

#### More transparency

The evidence uncovered by the Institute indicates that there are grounds for concern that universities could be captured and that academic freedom could be compromised as

commercial interests penetrate decision-making in universities.

Consequently, it is important for universities to have in place structures that keep the activities of universities and their staff transparent and accountable.

These could include a registry where universities disclose relevant interests and contacts with industry, and clear ethical guidelines to insulate universities and their staff from commercial pressures and conflicts.

Without such structures and with the increasingly close relationships between Australian universities and commercial organisations, it is likely academic freedom will be jeopardised, if it has not been already.

As this happens universities could be brought into disrepute and even captured by the fossil fuel and other industries. ■



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# Silencing dissent: The Federal Government strikes

***In their recent book Silencing Dissent, Sarah Maddison and Clive Hamilton warned that many NGOs remain concerned that there could be a crackdown on their charitable status. As James Arvanitakis reports, Aid/Watch appears to be the first casualty.***

Aid/Watch is an independent watchdog for Australia's aid program. Established in 1995, the organisation was founded to shine a spotlight on the way increasing amounts of aid were being delivered for profit rather than poverty alleviation.

Consequently, Aid/Watch has often been critical of government policy related to trade, aid and debt.

Aid/Watch produces and disseminates information to raise public awareness about development issues, engaging in public education and community outreach programs. It also monitors and comments on Australian Government aid, trade and debt policies, seeking to ensure they are consistent with United Nations' sustainability principles.

## **All charities threatened**

Earlier this year, the Australian Tax Office revoked Aid/Watch's charitable status in a decision that seriously threatens the public role of all Australian charities.

In an ATO ruling, Aid/Watch has lost its ability to act as a charity for 'trying to procure changes in Australia's aid and development programs' and for being a 'political' organisation.

Aid/Watch is a very small charitable organisation...and the removal of charitable status threatens its very existence.

Since 2000, there has been a flurry of Federal Government reviews of the form that charities take.

The 2001 Inquiry into the Definition of Charities and Related Organisations recommended that 'charitable purpose' be broadly defined as for public benefit, including 'protection,

maintenance, support, research, improvement or enhancement'.

It acknowledged non-party political activity as acceptable for charities, provided it 'furthers or are in aid of, the charity's dominant charitable purpose'.

In 2005 an ATO ruling banned charities from having a purpose of 'promoting a particular point of view'.

At the same time, it stated that political activities in pursuit of a charitable purpose were acceptable, provided 'political activities are no more than ways of carrying out the charitable purposes'.

In October 2006 an ATO decision removed charitable status from Aid/Watch. In its Decision the Tax Office recognised that Aid/Watch's objectives are entirely charitable. However, it cited three activities of the organisation that it believed were not consistent with charitable status:

1. participation in joint campaigns to promote human rights and democracy in Burma;
2. participation in efforts to convey concerns about the Free-Trade Agreement between Australia and the USA;
3. involvement in a media event highlighting the environmental impacts of World Bank programs.

The ATO alleged these three activities sat outside the ATO definition of acceptable political activities for a charity. Though Aid/Watch appealed in April 2007, the ATO upheld its original decision.

The ATO's new ruling in response to the appeal goes even further by defining the purpose of the organisation through activities such as these.

For the ATO, such activities now define an organisation, thus Aid/Watch can not be considered a charity. This ruling

has application for the charitable sector as a whole.

With this ruling, the distinction between purpose and activities is dissolved – Aid/Watch's uncharitable political purpose is inferred by its activities.

The new ATO ruling establishes a worrying precedent.

In this context, any political activity, even signing a petition against the military dictatorship in Burma, can put an organisation in breach of its charitable status.

Aid/Watch is a very small charitable organisation, with an annual income below \$100,000, and the removal of charitable status threatens its very existence.

A new appeal was submitted in early May 2007. The basis for this appeal is that the ATO has breached its own 2005 ruling by confusing purpose with activities, and that the purpose of Aid/Watch is indeed charitable.

The new ATO ruling establishes a worrying precedent that charities cannot engage in 'any activity designed to change Australian Government laws, policies or decisions. Neither can charities engage in propagating or promoting a particular point of view'.

It is hard to avoid the conclusion that the crack-down on charities is designed to silence organisations whose advocacy work the Federal Government does not like. It therefore poses a grave threat to civil society and the health of our democracy. ■

*Dr James Arvanitakis teaches at the University of Western Sydney and is a Member of Aid/Watch's Committee of Management.*

*See: [www.aidwatch.org.au](http://www.aidwatch.org.au).*

# Grassroots campaign against the sexualisation of children

**Julie Gale, a Melbourne mother and performer, has attracted huge support for her campaign against the sexualisation of children. Here she explains the genesis of a new organisation called Kids Free to Be Kids (Kf2bK).**

Over the years, I've become more and more frustrated at how much sexualised imagery my children are being bombarded with, through media, billboards, television, music video clips, kids magazines, clothing, toys and so on.

Graphic billboards at the end of my residential street have been a great source of annoyance. One stated boldly 'SEX FOR LIFE'.

Another featured a man standing against a bed (back towards camera) apparently with his fly undone. A woman sitting in the bed stares back at him with supposed shock and delight, at what we can only guess is a 'STRONGA LONGA DONGA.'

The thing that bothers me most about this ad is not the PREMATURE EJACULATION or ERECTION PROBLEM wording, but the fact that the 'woman' looks no older than 14 years.

Children are reportedly experimenting sexually at a much younger age.

It's tricky answering questions about male sexual dysfunction with kids who haven't even processed information about a normal functioning sex life yet.

When my kids were very young, I heard them listening to music and giggling wildly to the lyrics 'Oooh I am so sexy, soft and smooth', only to discover it was a song on my six-year old daughter's 'Barbie Pool Party' CD. I thought, 'Something's wrong here'.

Someone in a board room somewhere, has decided that it's OK for this song to go on a CD for very young girls'.



My list of examples is long. I'm no prude. I'm a fun adult who enjoys life. I write comedy for goodness sakes. And I have no problem talking about sexuality with my kids, when I feel they are ready for it.

With a background in writing and performing, I decided to write a one woman show about the sexualisation of children. I spoke with many parents while researching material, and discovered that I was not alone in my concerns.

When The Australia Institute's *Corporate Paedophilia* discussion paper was published, I immediately contacted Dr Emma Rush. I think her research has been instrumental in encouraging a mostly silent public to start speaking out.

One line in the paper particularly grabbed my attention: '... there has, as yet, been no sustained public debate about the sexualisation of children in Australia.' There seemed to be people talking and writing about the issue, but there was no apparent co-ordinated campaign.

## A new campaign

It was an easy decision to scrap the one-woman show and turn my attention to raising public awareness.

I formed Kf2bK, with the dedicated help from two other mothers at my children's school. We joined forces with Young Media Australia, who have been committed to the healthy development of children in the media for over 50 years.

Barbara Biggins and her team provide a wealth of wisdom and expertise and are also able to receive sponsorship and philanthropic money, which is so vital to running a successful campaign.

It's been a steep learning curve. I'm still learning about our regulatory bodies and, as a parent, I believe self-regulation is currently failing our children. Billboard advertising is not vetted before it goes out to the public domain. Where is the consultation with child development experts?

Young kids magazines have no regulation whatsoever. Our tween market is worth 4 billion dollars per year to the Australian economy – with so much money at stake, who's looking after the welfare of our kids?

## Evidence of harm

Recently, I witnessed first hand, highly sexualised and completely inappropriate images posted by computer savvy 11 yr old girls on their websites. This is not uncommon.

Children are reportedly experimenting sexually at a much younger age – and according to many social workers, oral sex in the first year of high school is also not uncommon. Sexually transmitted infections, depression, anxiety, and eating disorders are all increasing in our kids' lives.

Psychologists, psychiatrists and social workers working at the coalface with young children are concerned. They see, both from a research base, and from their clinical experience, strong evidence of harm. Concerns from many segments of the community should not be misconstrued as 'moral panic'.

When The Sunday Age and Today Tonight first mentioned the campaign, we were amazed at the extraordinary reaction. We received many hundreds of supportive emails from a cross-

section of the community, including contact from America and France.

Kf2bK calls for people to register their names on our website. This is a powerful way for individuals to join the debate and to help us build our community body of evidence.

The advertising industry purports to reflect community values; by building our numbers we intend to demonstrate exactly what those values really are.

It's time we adults started taking responsibility for what our kids are being exposed to.

Kids free 2b Kids and Young Media Australia are committed to children developing to their full potential - without exposure to sexualized imagery before they are developmentally ready to process it. ■

*You can read more about Julie's organisation at [www.kf2bk.com](http://www.kf2bk.com)*

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## See Paris and die?

***Few people are willing to defend the rampant sexualisation of children in marketing and popular culture. Duncan Fine, co-author of Why TV is Good For Kids, did so recently in The Australian where he lauded Paris Hilton as a role model for young girls. Here, Steve Biddulph responds.***

Duncan Fine's admiration of Paris Hilton makes all the sense in the world. She stands for the same values he does, a total addiction to being noticed. A lack of clear thinking. An inability to construct a coherent life beyond simply getting in the papers.

The real person that is Paris Hilton, the little girl she once was and the old woman she one day will be, would in a better world be left alone.

We should look away as we should when a drunken woman exposes herself. Caring friends should take her home.

But the Paris Hilton we all know is not a person. She's an icon, and we make our icons from deep unconscious places, to reflect our times, to help us struggle with large forces.

Sexuality as a commodity is a terrible thing to build an identity on.

So Nelson Mandela stands for courage and endurance. Tony Blair for style before substance. George Bush for venal stupidity, and the terrible destructive power of greed. Back home, Julia Gillard might stand for intelligent womanhood. Kevin Rudd for a fragile, but yearned for, future of better values. John Howard for looking after number one.

The great soap opera of our lives is played out by these archetypes who represent our collective lives. We need a Paris Hilton because feminism has

wavered, drifted, and seeped away in a miasma of academic self indulgence and careerism, while girls and young women are still being trashed by the lack of real mentors and helpers through the dangerous passage to adulthood.

Paris represents the clear and present danger that all affluent young women face - what happens to a human being who has no centre. Paris Hilton did not make her own image, as Duncan Fine thinks. She simply fell into the nearest, deepest pothole. She's the Paris we had to have.

The icon Paris was crafted over time by a thousand journalists, columnists, photo editors, who saw someone really screwing up in a very public way, despite a huge monetary start in life, and couldn't resist satirising them.

As a result, she's seen by the adult world with scorn, derision, and boredom, in about equal amounts. She's fascinating in the way a slowly unfolding bus crash is fascinating.

The recent and important concern about sexualising children, corporate paedophilia as it is quite accurately called, arises from our mismanagement of sex and the disappearance of love in our society.

Sexuality as a commodity is a terrible thing to build an identity on - it has all but destroyed Elle McPherson, and it's endangering our beloved Kylie.

It's about the outside, whereas personhood is about the inside. It's the advertising lie laid bare. It doesn't

satisfy. You get used and thrown away.

The real concern, and the most important focus we must draw here is that adolescent girls are having less and less time with older women who could help and teach and simply support them - mothers, sisters, aunts, teachers - and more and more time with screens and magazines.

We need to take better care of our girls.

They are easy prey for marketers, and marketers have slunk in like hyenas to drag them down.

Sexuality is an empowering and beautiful force in adolescence, when the adolescent chooses and controls its eventual unfolding on their own terms.

When it's separated out as a way to get love, for those who are not loved enough, then lives, tens of thousands of lives, are diminished, harmed, and sometimes thrown away.

We need to see clearly what Paris Hilton represents. We also need to remember every day the image of two soft-faced young girls' corpses swinging from the limb of a mountain ash tree overlooking Melbourne's city lights. We need to take better care of our girls. ■

*Steve Biddulph is a psychologist and the author of a number of best-selling books on parenting.*

# Academic economists call for Kyoto ratification

***Last month, 75 professors of economics called on the Federal Government to stop undermining international efforts to tackle climate change and to ratify the Kyoto Protocol without delay.***

The professors are among 271 university economists who signed a statement drawing attention to the economic damage to Australia of failing to reduce greenhouse gas emissions. The full statement is reproduced below, and the list of signatories can be seen on the Australia Institute's website ([www.tai.org.au](http://www.tai.org.au)).

## A Statement by University Economists on Climate Change

1. The Intergovernmental Panel on Climate Change has determined that warming of the world's climate is 'unequivocal' and that it is almost certainly due to human activity. It expects that further warming will occur, leading to sea-level rise and changes in weather patterns most of which will be adverse. This finding is supported by the leading scientific bodies of the world, including the CSIRO and the Australian Academy of Science.
2. The IPCC and the CSIRO anticipate that Australia will be seriously affected by climate change including more heat waves, fires of greater intensity, reduced soil moisture, declining water security, greater risks to life and property from sea-level rise and storms, risks to major infrastructure from extreme events and substantial impacts on agriculture and forestry.
3. Global climate change carries with it serious environmental, economic and social risks and preventive steps are urgently needed. Policy measures are available that would greatly reduce emissions of carbon dioxide and other greenhouse gases at modest economic cost. Credible estimates suggest that a 50% emissions reduction is achievable for less than one year's growth.
4. Economic instruments - such as carbon taxes or emissions trading - should be an important part of a comprehensive climate change policy. Revenue raised from carbon taxes or the sale of permits can be used to reduce taxes elsewhere in the economy.
5. A major change in our emissions-related activities can be achieved over an extended period of transition. Australia has shown over the last two decades that it can manage significant change without major negative consequences for incomes or employment and, in fact, with change being a stimulus to improving innovation in the longer term.
6. Since developed countries are responsible for around 75% of increased greenhouse gases in the atmosphere, and are in a stronger economic position, they should take the lead in cutting emissions. It is fair that developing countries should begin reducing their emissions only when developed countries, including Australia, have led the way.
7. The Kyoto Protocol represents the first step towards a major international effort to deal with climate change in the long term. The refusal by Australia and the United States to ratify the Kyoto Protocol is undermining global efforts to tackle climate change.
8. In addition to demonstrating international leadership befitting one of the richest countries in the world, it is in Australia's economic interests to join the primary international effort to effort to cut emissions and we call on the Australian Government to ratify the Kyoto Protocol without delay. This should be complemented by domestic initiatives dedicated to emissions reduction.



# Insuring against catastrophic change

**On May 11, while the economists' statement was being circulated to academics, The Australian carried an opinion piece attacking it by two anti-Kyoto economists, Alex Robson of ANU and Sinclair Davidson of RMIT. Peter Dixon and Philip Adams - the former and current directors of the Centre of Policy Studies at Monash University - have written a reply. The Australian refused to publish it, so we reproduce it below.**

We have signed the economists' statement for three connected reasons:

1. compelling advice from the scientific community suggests that a sharp cut in world greenhouse gas (GHG) emissions would substantially reduce the risk of catastrophic climate change over the next century;
2. the Kyoto forum offers the best available possibility for Australia to play a constructive role in setting up world-wide arrangements for cutting GHG emissions; and
3. as part of a world-wide effort, Australia could achieve deep cuts in its own GHG emissions at only a moderate cost in terms of reduced economic welfare.

It is on point (3) that economists have particular expertise, justifying the presentation of an "economists" petition.

If the world embraced the need for deep cuts in GHG emissions, we would expect rapid technological progress...which would reduce the costs of adoption.

Cutting GHG emissions is like buying an insurance policy: we incur a cost (a loss in GDP) to reduce a risk (catastrophic climate change).

In any insurance decision, the cost matters. If a worthwhile reduction in risk costs 50% of income, then living with the risk may be preferable. But if it costs 1% of income, then taking the insurance policy may be the best option. So what will it cost?

For the last 20 years, we have been undertaking economic modelling



exercises for Australian and overseas organizations on the costs of GHG reductions. Our modelling, and that of other quantitative economists around the world, supports the claim in the petition that:

"Credible estimates suggest that a 50% emissions reduction is achievable for less than one year's economic growth".

Robson and Davidson have difficulty in figuring out what this means. Just to be clear, we will explain it in terms of the report by the Allen Consulting Group to the Business Roundtable on Climate Change (March, 2006).

Modelling we contributed to that report shows Australia's real GDP growing between now and 2050 at an annual rate of 2.2% under the assumption of no new GHG policies. In this scenario, Australia's GHG emissions by 2050 are 80% above their level in 2000.

In an alternative scenario, Australia undertakes policies to reduce its GHG emissions by 2050 to 60% below their level in 2000. Even with this very deep cut in emissions, Australia's GDP grows between now and 2050 at an annual rate of 2.1 per cent.

The implication is that a massive 60% cut in GHG emissions (relative to the 2000 level) costs about 20 months growth – the level of GDP that we would have reached on January 1, 2050 is not reached until September 1, 2051. A lesser cut would incur a

lower cost. Taking account of non-linearities (the first 1% cut is much easier than the last 1% cut), a reasonable estimate for the cost of the 50% cut mentioned in the petition is 12 month's growth.

Why do modelling results suggest that GHG emissions could be sharply reduced at seemingly moderate cost? Are these results plausible?

The main GHG-emitting activities are fossil-fuel-based provision of electricity and motor fuels. In Australia, these account for about 5.4% of GDP.

Advice from scientists and engineers indicates that the adoption of current alternatives to fossil-fuel-based technologies would no more than double the costs of electricity and motor fuels.

As a back-of-the-envelope calculation, this suggests that Australia could make a 50% switch to alternative technologies at a cost of 2.7 per cent of GDP, a little over an average year's growth.

But this is a pessimistic view of the costs of climate insurance. If the world embraced the need for deep cuts in GHG emissions, we would expect rapid technical progress in GHG-benign technologies which would reduce the costs of their adoption. ■



Nicholson of "The Australian" newspaper. [www.nicholsoncartoons.com.au](http://www.nicholsoncartoons.com.au)

# The Australian gets shifty on nukes

**Fiddling the numbers is not something normally associated with newspapers but, as Andrew Macintosh explains, it seems that is what The Australian newspaper has been up to.**

As reported in the previous Newsletter in March, *The Australian* newspaper carried several stories about a Newspoll survey it had commissioned, which it claimed showed there had been a dramatic reversal of attitudes towards nuclear power in Australia.

According to *The Australian*, more people now support nuclear power than oppose it, a turnaround from previous Newspoll surveys conducted in May and December 2006.

The lead story, entitled 'Nation warms to nuclear future' was written by Dennis Shanahan and Sid Marris. It was reported widely and has influenced political attitudes to nuclear power.

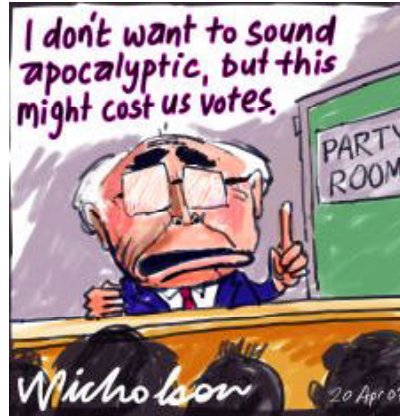
The results show that there has not been a 'dramatic shift' in attitudes as claimed by *The Australian*.

As a result of the articles in *The Australian* and the coverage they attracted, many opinion makers, politicians and journalists now believe Australians are warming to nuclear power.

However, the story in *The Australian* seriously misrepresented the Newspoll results. The 'dramatic reversal' claimed by *The Australian* is explained not by a real change in attitudes but by the fact that the newspaper compared the results of two different survey questions.

The Newspoll surveys conducted in May and December 2006 asked:

'[c]urrently, while there is a nuclear reactor at Lucas Heights in Sydney used for medical and scientific purposes, there are no nuclear power stations in Australia. Are you personally in favour or against nuclear power stations being built in Australia?'



Nicholson of "The Australian" newspaper. [www.nicholsoncartoons.com.au](http://www.nicholsoncartoons.com.au)

The question asked by Newspoll for *The Australian* in March 2007 was as follows:

'Thinking now about reducing greenhouse gas emissions to help address climate change. Are you personally in favour or against the development of a nuclear power industry in Australia, as one of a range of energy solutions to help reduce greenhouse gas emissions?'

The framing of the two questions is not the same.

The second question frames the nuclear question in terms of the need to cut greenhouse gas emissions *and* puts it forward as but one of a range of solutions.

Framing bias is a standard concept in surveying, and it is unlikely Newspoll would endorse comparison of two questions framed in differing ways.

*The Australian* has been campaigning strongly in favour of nuclear power in Australia since the Prime Minister called for a public debate last year.

On the basis of the Newspoll results it is impossible to make any valid claim about changing attitudes to nuclear power.

### A valid comparison

To test the validity of *The Australian's* claims about the reversal of public opinion, and to correct the public record, the Australia Institute

commissioned Newspoll to conduct a survey on attitudes to nuclear power using the same question as had been asked in the original surveys.

The results show there has not been a 'dramatic shift' in attitudes as claimed by *The Australian*.

The number opposed to nuclear power remains substantially larger than the number who support it - 46 per cent versus 36 per cent.

The level of support for nuclear power has remained fairly stable since May 2006.

In fact, the level of support for nuclear power has remained fairly stable since May 2006.

The only change has been a small decrease in opposition (from 50 per cent to 46 per cent) as some Australians move toward being undecided rather than being in favour of nuclear power. (In these polls, the margin of error is three per cent.)

Consistent with previous surveys, we found opposition to nuclear power is highest amongst women (55 per cent), the young (49 per cent) and middle-aged (49 per cent), parents (50 per cent), and people from middle-income households (49 per cent).

Despite the slight shift in opinions and higher levels of support for nuclear power seen in some groups, the proportion of Australians who are strongly opposed to nuclear power, 31 per cent, is still almost double that which is strongly in favour, 16 per cent.

The Howard Government has signalled its intention to run a campaign to promote nuclear energy.

However, the evidence suggests the Government has a considerable amount of work to do if its aim is to win public support for its nuclear strategy. ■

# Which greenhouse strategy do you prefer?

***In recent months much commentary has surrounded the Government's preferred greenhouse strategy. In a new survey, the Institute explored what Australians really prefer. Andrew Macintosh reports.***

The Federal Government's greenhouse policy is mainly based on the promotion of nuclear energy and clean coal technology.

Although the policy includes some measures to promote alternatives like energy efficiency and renewable energy, these are viewed as secondary with most of the public debate directed towards clean coal and nuclear power.

There is widespread support for renewable energy and a greenhouse policy that places greater emphasis on energy efficiency.

To gauge the level of public support for the Government's greenhouse strategy, the Australia Institute commissioned Pollinate to conduct an online survey of 1,034 adult Australians.

Respondents were asked which of the following two strategies they would prefer:

- a strategy based mainly on the development of nuclear power and clean coal technology which would reduce greenhouse gas emissions from coal-fired power plants; or
- a strategy based mainly on saving energy through greater use of energy efficient appliances, fuel efficient cars and more energy efficient buildings and the development of renewable energy options like solar and wind power.

They were also asked to select their preferred source of electricity from a list of renewable and non-renewable options.

The vast majority of Australians (74 per cent) would prefer a greenhouse strategy based mainly on energy efficiency and renewable energy.

Only 19 per cent of Australians prefer the Government's approach that focuses on nuclear power and clean coal technologies.

**Even among Coalition voters, the number of people who prefer a strategy mainly based on energy efficiency and renewable energy (60 per cent) greatly outweighs the number preferring the nuclear power/clean coal approach (35 per cent).**

The desire for an alternative approach to climate change is also reflected in the data on people's preferred source of electricity.

As the pie chart shows, seventy seven per cent of Australians would prefer to get their electricity from a renewable power source.

Solar and wind attract the most support (50 and 13 per cent respectively), but a substantial number of people also prefer other renewable energy sources like hydro, geothermal and biomass (14 per cent collectively).

In comparison, only a small number of people would prefer to get their coal (one per cent).

These results provide an insight into the dissatisfaction recorded in other surveys about the Federal Government's greenhouse policy.

For example, an AC Nielson poll conducted on behalf of the Sydney Morning Herald in November 2006 found that 62 per cent of Australians are unhappy with the Federal Government's response to climate change.

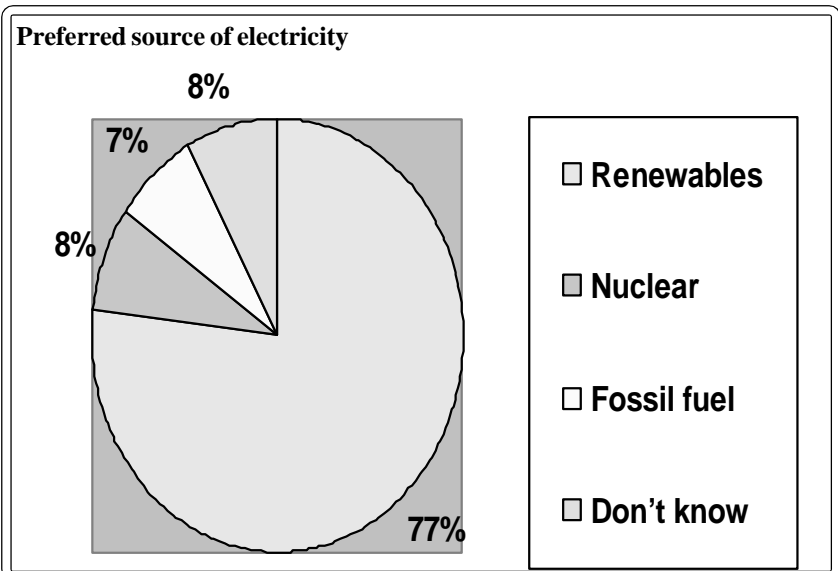
Part of the reason for the discontent may relate to the nuclear power/clean coal strategy that the Government has adopted.

The widespread support for renewable energy and a greenhouse policy that places greater emphasis on energy efficiency also bolsters the case for increasing the Mandatory Renewable Energy Target (MRET).

At present, MRET will only result in an additional 0.5 per cent of electricity being supplied by renewable power sources on 1997 levels by 2010 – an underwhelming target by any measure.

To promote the uptake of renewable energy and bring forward reductions in the cost of renewable energy, there have been calls to increase and extend the MRET, calls that have fallen on deaf ears.

The results of the Institute's survey indicate that such a policy is likely to be supported by a large majority of the population. ■



# Institute notes

## New publications

A. Macintosh, *Attitudes to Nuclear Power. Are they shifting?* Research Paper 43, May 2007

A. Macintosh and C. Downie, *A Flight Risk? Aviation and climate change in Australia* Discussion Paper 94, May 2007

C. Hamilton, *Scorcher: The dirty politics of climate change* Black Inc. April 2007

## Forthcoming publications

C. Hamilton and C. Downie, *University Capture: Australian universities and the fossil fuel industries*

E. Rush and C. Hamilton, *Kids and Consumerism*

C. Downie, *Carbon Offsets*

A. Macintosh and C. Hamilton, *Greenhouse Strategies: What do Australians prefer?*



## MEMBERSHIP RENEWAL TIME

Memberships expire on June 30th of this year. To renew your membership, please fill in the enclosed membership renewal form or go to our website at [www.tai.org.au](http://www.tai.org.au) and you can renew on-line using our secure payment facility.

## Aviation report sparks strong reactions

The Australia Institute's aviation report (see page 1) received wide-spread media coverage when it was released in late May.

Both the Federal Government and sectors of the aviation industry took swipes at the conclusions of the report which recommends aviation carbon dioxide emissions be included in a national emissions trading scheme.

The Deputy Prime Minister, Mark Vaile, attacked the report as 'whacky', saying an increase in the cost of air travel would 'wreck the economy'.

Virgin Blue also attempted to ridicule the report, with the Chief Executive saying, "I just don't fathom what they are on about."

However, a week after the report was released former British Airways head, Sir Rod Eddington, warned that the

aviation industry will become an international pariah if it does not accept its inclusion in an emissions trading scheme.

Sir Rod Eddington's observations stand in stark contrast to the dismissive comments by the Government and sectors of the industry and strongly support the conclusions of the report, which will no doubt be unremarkable in Australia within two years, as they already are in Europe.

The recommendations of The Australia Institute and Sir Rod Eddington to include aviation emissions in an emissions trading scheme have been backed by the new British Government Energy White Paper, which states: "The Government believes that the best way for aviation to contribute to the goal of emissions reduction is through a well-designed emissions trading scheme." ■

## Scorcher: The dirty politics of climate change

This latest book by our Executive Director, Dr Clive Hamilton, has already appeared on the Independent Bookshop's best seller list and is in its first reprint..

In *Scorcher*, Clive Hamilton reveals a shadow world of lobbyists and sceptics, spin and hidden agendas.

He investigates a deceitful government and a compliant media. And he lays out the facts about Kyoto, carbon emissions and what governments and individuals might do, and have done.

Copies of the book are still available at the Institute so please contact us if you would like to purchase one.