

# green markets brief

## GLOBAL POLLIES AND POLICY

### G7 mum on climate change policy:

Climate change related issues will become increasingly important for G7 economies, Finance Ministers from the group of seven nations said this weekend, but no path of action was declared when they met in the Germany city of Essen.

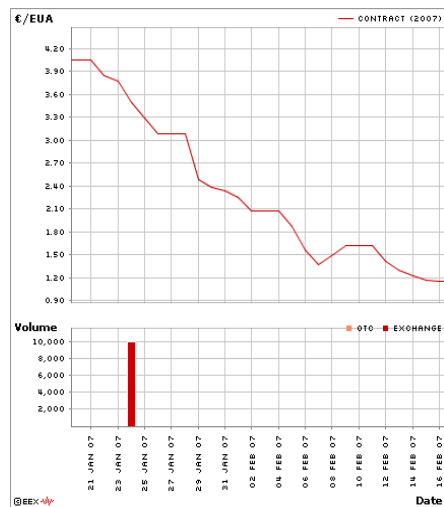
**Merkel wants talks before June:** In a meeting with UK Prime Minister Tony Blair on Tuesday night, German Chancellor Angela Merkel said she hoped preparations of a post-Kyoto agreement to reduce global greenhouse gas emissions could be worked out this spring.

**Global forum seeks tech transfer:** A special fund should be created to facilitate transfer of low-carbon technologies to developing countries, according to delegates at an international climate policy meeting in Washington DC.

**Global post-2012 framework appeal:** Legislators from the G8 and several developing countries issued a statement that calls for negotiations on a global greenhouse gas reduction framework after 2012 to be concluded by the year 2009, and for a global carbon market.

**Off to Bali in December:** The Indonesian island of Bali has been confirmed as the venue for the United Nations climate change conference in December.

## Carbon drop continues



## EU POLICY

### German authority appeals NAP case:

The German emissions trading authority (DEHST) will appeal a Berlin court ruling that stated the cut in allocation to German installations was partly illegal, an official with DEHST told Point Carbon today.

### Hungary to auction 900,000 EUAS:

Hungary will auction 900,000 CO2 allowances to the European carbon market in early March, according to the state secretary of the Ministry of Finance.

**Sendeco2 swap contract:** Barcelona-based CO2 exchange Sendeco2 said

today it will offer members the possibility to swap phase one and phase two contracts for the EU emissions trading scheme.

**EU OKs 30pc reduction by 2020:** The European Parliament today voted in favour of basing all internal policy for the EU on a target to reduce greenhouse gas emissions to 30 per cent below 1990 levels, which is 10 percentage points more than the European Commission (EC) has proposed.

**EU: no binding renewable target:** The EU energy ministers today rejected the European Commission proposal to introduce a binding target for renewable energy of a 20 per cent share by 2020.

### Mandatory auctioning in phase 3?

There might be a minimum level of auctioning in phase three of the EU emissions trading scheme (ETS), Environment Commissioner Stavros Dimas said in an interview with Euractiv.

### Ole! Spain cuts CO2 emissions:

Spain managed to turn around a 20-year trend of rising energy intensity with a 1.12 per cent decline last year, equivalent to a reduction of 3.5 million tonnes in CO2 emissions, according to figures issued by the industry ministry.

**Dutch Govt backs data release:** The Dutch Government has voiced its support for a proposal to publish verified emissions data for 2006 from

all member States simultaneously, and up to six weeks earlier than planned in order to avoid a repeat of the haphazard and uncoordinated publication of data last year by some European Union member States.

**Ireland confirms large GHG rise:** Ireland's greenhouse gas emissions rose 1.9 per cent in 2005 compared with 2004, figures from the Environmental Protection Agency (EPA) show, with the transport sector accounting for much of the increase.

**US wary of EU ETS:** The US ambassador to the EU today said the 27-member bloc broke every rule and principle when it set up its emissions trading scheme (ETS), and that it would not serve as a model to the US, according to the *Irish Times*.

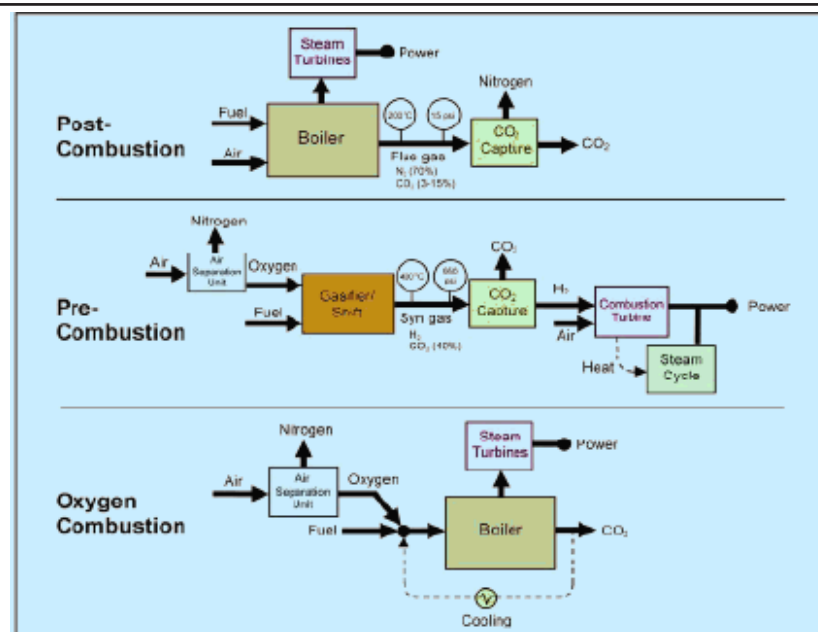
**Russia eyes ITL link:** Russia could start its initialisation process with the UN's International Transaction Log (ITL) this summer, according to the Federal Center of Geocological Systems, the institution tasked with administering Russia's registry.

**Denmark fluoride ban gets OK:** The European Commission on 6 February decided that Denmark will be allowed to maintain its ban on greenhouse gases with a fluoride content.

## AUSTRALIA POLICY

**Uncomfortable times for PM:** The Prime Minister, on the defensive about climate change, was asked what Australia would be like if average temperatures rose six degrees, according to *The Australian Financial Review* (10/2/2007, p.20). "It

## How carbon dumping process works: three ways to capture CO<sub>2</sub>



**Capture and cash in:** There are three key elements involved in the CCS process for power generation: (a) Capture: A number of CO<sub>2</sub> capture systems are available post-ombustion, pre-combustion and oxyfuel combustion. Factors that impact the selection of the capture system include the percentage concentration of CO<sub>2</sub> in the gas stream, its pressure and whether the fuel type is gaseous or solid.

- **Post-combustion capture** of CO<sub>2</sub> in power plants involves the capture of CO<sub>2</sub> from the flue gases of conventional power plants using chemical capture processes. The natural gas processing industry already separates CO<sub>2</sub> using similar technology;
- **Pre-combustion capture** through gasification is existing technology being adapted for power generation. Although the initial fuel conversion steps of pre-combustion are more elaborate and costly, the higher concentration of CO<sub>2</sub> in the gas stream together with the higher pressure make the separation more straightforward.
- **Oxyfuel combustion** is in the demonstration phase and uses high purity oxygen for the combustion process. This results in high CO<sub>2</sub> concentrations (i.e. lower nitrogen) in the gas stream, and hence in lower cost capture of CO<sub>2</sub>.

Source: HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON SCIENCE AND INNOVATION INQUIRY INTO GEOSEQUESTRATION TECHNOLOGY SEPTEMBER 2006 A JOINT SUBMISSION BY THE AUSTRALIAN COAL ASSOCIATION AND THE MINERALS COUNCIL OF AUSTRALIA

would be less comfortable," came the reply. The Prime Minister has been defensive and made mistakes, while his newly appointed Environment Minister Malcolm Turnbull has resorted to school master-like lessons on long-term climate trends. It has not worked, nor has the tactic of branding Labor climate change "fanatics". The government is certainly in a tight spot, but it's too early to say if it will be a vote changer. Sol Lebovic, the chair of Newspoll, says the environment was likely to be one of the three most important issues this election, behind health and education. "It will not get to No. 1 but it's already more important than interest rates," he said. Mm

**PM eyes opinion polls:** The Prime Minister's new-found interest in global warming has a lot to do with his plummeting opinion poll ratings and very little to do with a sudden, sinking conviction at Kirribilli House that the end of the world might be more nigh than we would like, according to Mike Carlton in *The Sydney Morning Herald* (10/2/2007, p.42). For years, Howard and his ministers cheered on by their claue of right-wing media ratbags - have scorned warnings of climate change as no more than a wicked plot to destroy capitalism. mm

### NZ POLICY

**NZ cool on Aussie ETS linkup:** Prime Minister Helen Clark on 13 February outlined her plan for the nation to become "carbon neutral" but he government remains cool on emissions trading with Australia, said *The Australian* (14/2/07 p.7). In an interview

with the newspaper, New Zealand Climate Change Minister, David Parker, said Australia's failure to ratify the Kyoto Protocol meant the Kiwis were reluctant to trade emissions in the short term. "There may be better places for us to trade with. If we've got Kyoto-compliant units, it might be in our interests to trade with other Kyoto-compliant countries," he said. Asked whether it was a disadvantage that Australia had not signed Kyoto if it wanted to establish emissions trading with other countries, he replied: "I wouldn't comment on that. I won't go further than what I've said but can I just say another

point here is that underlining any trade scheme is a cap. A cap actually creates the ambition to reduce emissions below what they would otherwise be." mm

### Holicim backs trading scheme:

Multinational cement maker Holicim's New Zealand subsidiary has recommended an emissions trading scheme for the country in a briefing paper drawing heavily on criticisms of the EU ETS.

**Forest credit battle with NZ Govt:** New Zealand's proposed policies on land use and land use change continue to cause friction with forestry associations, with

one association calling the government "carbon thieves" this week.

### US POLICY

#### Washington Governor issues order:

The Governor of the northwestern US state of Washington signed an executive order last week directing her state to bring its greenhouse gas emissions down to their 1990 levels by the year 2020, 25 per cent below that by 2035, and 50 per cent below 1990 levels by 2050.

**Wisconsin lawmakers like Cali style:** Legislators in the midwestern US state of Wisconsin plan to introduce a bill requiring greenhouse gas emissions to return to 1990 levels by the year 2020, the target adopted by California's state legislature last year.

**Eastern states to miss targets:** Six northeastern US states and five eastern Canadian provinces that set a joint goal to reduce greenhouse gases in the region by 10 per cent below their 1990 levels will fail to meet that target, a forum this weekend revealed.

**Connecticut mulls auctioning:** Stakeholders in Connecticut yesterday argued over how the northeastern US state should allocate emissions credits under the Regional Greenhouse Gas Initiative, a carbon trading system that is set to enter into force in 2009, comprising nine states in the region.

**Hawaii joins clean programme:** Hawaii on Monday signed an agreement with the US Environment Protection Agency (EPA) to join the Clean Energy-Environment Partnership, a voluntary effort to promote clean energy in 15 US states.

**Senators torn on caps:** Several members of the US Congress spoke to their international counterparts at a pre-G8 climate change forum, presenting evidence both for and against the likelihood of mandatory carbon caps in the US.

**US power firms seek offsets:** Five US power companies are seeking to offset over nine million tonnes of carbon dioxide-equivalent through emissions reduction projects in the United States

in anticipation of future mandatory caps on carbon emissions.

## CANADA POLICY

**Canadian dosh for climate change:** Canadian Prime Minister Stephen Harper announced his government would budget C\$1.5 billion in new funding for provinces to battle climate change, with \$350 million going to the French-speaking province of Quebec.

**BC province aims for 2020 33pc cut:** British Columbia Premier Gordon Campbell has called for the province to cut its greenhouse gas emissions 33 per cent below current levels by 2020.

**Trading could affect 40pc of bourse:** If Canada proceeds to curb greenhouse gas emissions by way of legislation, the carbon liabilities firms could make up 40 per cent of the Toronto stock exchange's market capitalisation, according to a new report by investment bank CIBC World Markets.

**Canuck Parliament passes Kyoto bill:** Canada's Parliament passed an opposition bill to ensure the country meets its Kyoto obligations by reducing greenhouse gas emissions six per cent below the 1990 level by 2012.

**Canadian PM gives in:** Canadian Prime Minister Stephen Harper says he will respect a new bill calling on the government to commit to its Kyoto obligation if the act actually becomes a law, Canadian media reported.

**Dupont: improve on Kyoto:** The US should learn from the mistakes made in the Kyoto Protocol "and then do much better," chair and CEO Chad Holliday of

## Carbon dumps fight negative impacts

	Early action, full range of technologies including CCS	Early action, full range of technologies without CCS
<b>Key Sectors</b>		
Agriculture	-2%	-3%
Coal	-22%	-38%
Electricity	-14%	-22%
Other energy (oil and gas)	-14%	-29%
Nonferrous metals	-24%	-39%
Other manufacturing	1	2
Services	-1%	-1%
Total GDP	-2.50%	-3.20%

**Carbon dump benefits:** ABARE modelling shows the negative impacts on key Australian energy-intensive sectors such as energy and nonferrous metals are lessened by the availability of CCS. This benefit is largely derived through the lessening of

international impacts on the Australian economy of the contraction in demand for our major commodity exports, such as coal and aluminium that would result from different emission reduction strategies.

*Economic impact of climate change policy: the role of technology and economic instruments. Canberra*

chemical and manufacturing firm Dupont told the US Senate Committee on Environment and Public Works.

## PRICE

**12 February €1.42:** Allowances for delivery in the first phase of the EU emissions trading scheme lost €0.25 in value during the morning trading session as weaker gas prices and milder weather continue to dampen demand.

**13 February €1.30:** The price of EU allowances fell for both phases today, as falling German power contributed to a bearish sentiment.

**14 February €1.23:** The price of carbon for the second phase of the European emissions trading scheme came under new pressure this morning against the backdrop of softer continental power prices.

**15 February €1.17:** The price of carbon in the 2007 and 2008 contracts barely budged on Thursday as few participants appeared willing to take major new positions.

**16 February €1.16:** Phase-one allowances in the EU emissions trading scheme were shackled in a €0-10 range this morning, while second-phase contracts had a more volatile session, following German power up, then down again.

**MECHANISMS - JI****JISC elects new chair, vice-chair:**

Indian Shailendra Kumar Joshi has been elected the new chair of the JI supervisory committee (JISC), while Norwegian Georg Borsting will take over as the committee's vice-chair.

**Russian JI rules by March?** The draft set of rules for approving and hosting joint implementation (JI) projects in Russia was submitted to the government earlier this week, and could be adopted in early March.

**RAO rues Russian sloth:** Russia may have lost "thousands of millions of dollars in investment" by its failure to implement a domestic framework to host joint implementation (JI) projects, according to Anatoly Chubais, CEO of RAO UES, Russia's largest utility.

**MECHANISMS - CDM**

**CDM board confirms new chairs:** The executive board (EB) of the clean development mechanism, a United Nations body that has a key role in generating international carbon credits, on Thursday confirmed the appointments of a new chair and vice-chair.

**Brazil approves CDM projects:**

Brazil's government has recently approved seven clean development mechanism (CDM) projects, which are estimated to reduce emissions by a total of 709,588 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) per year.

**Dutch-Ukraine credit deal:** The Netherlands-EBRD Carbon Fund this week signed an emissions reduction purchase agreement (ERPA) to buy

**The long and short of it: how to trap CO<sub>2</sub>**

Characteristics Trapping mechanism	Nature of trapping	Effective time frame	Areal size	Occurrence in basin	Issues	Capacity limitation/benefits	Potential size	Capacity estimation method/requirements
Structural & stratigraphic	Buoyancy trapping within anticlines, fold, fault block, pinch-out. CO <sub>2</sub> remains as a fluid below physical trap (seal).	Immediate	10s km to 100s km	Dependent on basin tectonic evolution. 100s of small traps to single large traps per basin.	Faults may be sealed or open, dependent on stress regime. Fault orientation & faults could be leaky (oil points or compartmentalise trap).	If closed hydraulic system then limited by compression of fluid (low %) in reservoir. If open hydraulic system will displace formation fluid.	Significant	Simple volume calculation of available pore space in trap, allowing for factors that inhibit access to all the trap - eg. sweep efficiency, residual water saturation.
Residual gas	CO <sub>2</sub> fills interstices between pores of the grains of the rocks.	Immediate to thousands of years	Basin scale eg. 1000s km	Along migration pathway of CO <sub>2</sub>	Will have to displace water in pores. Dependent on CO <sub>2</sub> sweeping through reservoir to trap large volumes.	Can equal 15-20% of reservoir volume. Eventually dissolves into formation water.	Very large	Requires rock property data & reservoir simulation.
Dissolution	CO <sub>2</sub> migrates through reservoir beneath seal & eventually dissolves into formation fluid.	100s to 1000s of years if migrating more than 1000s of years if gas cap in structural trap & larger if reservoir is thin & has low permeability.	Basin scale eg. 10000s km	Along migration pathway of CO <sub>2</sub> both up dip & down dip.	Dependent on rate of migration (water barrier) & contact with unsaturated water & pre-existing water chemistry (less saline water better). Rate of migration depends on dip, pressure, injection rate, permeability, fractures, etc.	Once dissolved, CO <sub>2</sub> saturated water may migrate towards the basin centre thus giving the very large capacity. The limitation is contact between CO <sub>2</sub> & water & having highly permeable (vertical) & thick reservoirs.	Very large	Requires reservoir simulation & need to know CO <sub>2</sub> supply rate & injection rate.
Mineral precipitation	CO <sub>2</sub> reacts with existing rock to form new stable minerals.	10s to 1000s of years.	Basin scale eg. 10000s km	Along migration pathway of CO <sub>2</sub>	Dependent on presence of reactive minerals & formation water chemistry. Could precipitate or dissolve.	Rate of reaction slow. Precipitation could 'log' up pore throats reducing injectivity. Approaches permanent trapping.	Significant	Requires rock mineralogy.
Hydrodynamic	CO <sub>2</sub> migrates through reservoir beneath seal, moving with or against the regional ground water flow system whilst other physical & chemical trapping mechanisms operate on the CO <sub>2</sub> .	Immediate	Basin scale eg. 10000s km	Along migration pathway of CO <sub>2</sub> with or against the direction of the flow system that may move at rates of cm per year.	Dependent on CO <sub>2</sub> migration after the injection period, being so slow that it will not reach the edges of the sedimentary basin where leakage could occur.	No physical trap may exist & thus totally reliant on slow transport mechanism & chemical processes. Can include all other trapping mechanisms along the migration pathway.	Very large	Requires reservoir simulation & regional reservoir flow model.
Coal adsorption	CO <sub>2</sub> preferentially adsorbs onto coal surface.	Immediate	10s km to 100s km	Limited to extent of thick coal seams in basins that are relatively shallow.	Coals can swell reducing injectivity. Difficult to predict permeability trends. CO <sub>2</sub> adsorption not 100% effective which raises issue of leakage if no physical seal is present.	Injectivity poor due to low permeability. Effective at shallower depths than porous sedimentary rocks, but not at deeper depths due to permeability issues. Many injection wells required. If methane liberated might not be net CO <sub>2</sub> mitigation.	Low	Requires gas seepage data & knowledge of permeability trends & coal 'reactivity' to CO <sub>2</sub> .

**Keep it locked up:** Chart shows the different chemical and physical trapping mechanisms by which CO<sub>2</sub> will be stored in the reservoirs in the deep geological subsurface into which it has been injected.

three million carbon credits from a joint implementation (JI) project at the ISTIL steel mill in Ukraine.

**China to launch CDM fund:** China is to launch a fund in March that will help finance clean development mechanism

**Reference: CO<sub>2</sub> Storage Capacity Estimation: Issues and development of standards.**  
Bradshaw, J., Bachu, S., Bonijoly, S., Burruss, R., Holloway, S., Christensen, N.P., Mathiassen, O.M.,

(CDM) projects, State news agency Xinhua reported over the weekend, quoting sources with the Ministry of Finance.

**Czech Minister looks into GHG cuts:**  
Czech Environment Minister Martin

**2006 - Proceedings of the 8th International Conference on Greenhouse Gas Control Technologies, June 2006, Trondheim, Norway.**

Bursik is lining up initiatives in several sectors of the country's economy to cut greenhouse gas emissions, primarily targeting sectors not participating in the EU emissions trading scheme.

**AVIATION****Easyjet eggs airlines on on greening:**

Low-cost airline Easyjet has called on rival airlines to maximise environmental efficiency and for national governments to recognise more efficient airlines when forming aviation environmental policy.

**German air carriers want ETS part:**

Germany's association for air transport today called on the European Commission to limit emissions trading to just CO2 when aviation is eventually included in the scheme and not to limit the use of Kyoto credits for compliance needs.

**ETS****Emission permit hand-out danger:**

According to Alan Mitchell in *The Australian Financial Review* (10/2/2007, p.42), the proposed emissions permit system may in fact give permits away to the major polluters. This would partially "grandfather" the reform, since they would only have to buy permits to cover any increase in emissions beyond their initial allocation. It would also give incumbent polluters a competitive advantage over new entrants but it would avoid the political difficulties of raising massive amounts of additional tax revenue from industry. Mm

**Watch out for permit design:**

According to Brian Toohey in *The Australian Financial Review* (10/2/2007, p.62), permits to pollute the atmosphere could help reduce greenhouse emissions, mainly of carbon dioxide but this requires careful design or emissions could go up. In this event, governments would have to introduce a

complicated regulatory framework to establish an artificial market in which pollution permits serve no useful purpose yet bestow windfall gains on some players. Until recently the government rigidly opposed adopting a carbon trading scheme until all other countries did so at some time in the indefinite future but Prime Minister John Howard and his Industry Minister, Ian Macfarlane, recently expressed a willingness to consider the introduction of a national carbon emissions trading scheme well before that point. Mm

**How power stations may gain:** Ross Gittins, economics editor in *The Sydney Morning Herald* (10/02/2007, p.47), said

issuing permits to electricity producers based on their previous year's emissions will create a demand-supply gap in the market which will increase the burden on the consumers and raise entry barriers for new producers. According to Gittins, the proper way of issuing emission permits was to auction them to the highest bidders and not to give them away to the producers based on their last year's emissions but even if permits were "given away" initially, they'd soon acquire a value - known to economists as a "scarcity value" - because the demand for them (that is, for the right to make the additional emissions needed to produce more electricity) would exceed supply. Reducing the cap would create demand supply mismatch which would make emission permits more valuable and because the demand for electricity would also exceed supply, the power stations would be able to raise the price they charged for electricity accordingly. This would mean a windfall gain for

**Australian Govt ploughs money into carbon dumps**

CRC	2006/07 \$ million	2007/08 \$ million	2008/09 \$ million	2009-10 \$ million
CCSD	2.000	1.684		
CO <sub>2</sub> CRC	3.500	3.500	3.000	2.300

**Cash for dump research:** The government has provided \$50 million through the Cooperative Research Centres programme to foster collaborative research on CCS, which has resulted in a total investment of cash and in-kind support, including the CSIRO and all other partners, of around \$240 million in the following three CRCs:

The Cooperative Research Centre for Greenhouse Gas Technologies (CO2CRC); The Cooperative Research Centre for Clean Power from Lignite; and The Cooperative Research Centre for Coal in Sustainable Development (CCSD).

*Source: Economic impact of climate change policy: the role of technology and economic instruments*

existing power stations if they got their permits "free".

**CO2 reduction problems:** The price, design and regulatory trivialities of an emissions permit system may derail progress towards CO2 emissions reductions, wrote Brian Toohey in *The Australian Financial Review* (10/2/2007, p.62). Essentially, the size of the cuts in CO2 emissions would depend on how high the government set the carbon price. A plausible increase in price might give households an extra \$5 or \$10 a year, which would have to be offset against the increased price of electricity and petrol. As such, it's difficult to see a groundswell of voter support for the permit scheme. Wrong price decisions by the politicians could mean CO2 emissions rise, possibly requiring taxpayers to buy back some of the permits for emissions cuts to stay on the desired downward path. This prospect is not fanciful. Mm

**Aus wastes time dithering on ETS:**

Martin Wilder, head of climate change practice at law firm Baker and McKenzie, said Australia had wasted many opportunities by stalling on an emissions trading scheme, reported *The Australian Financial Review* (10/02/2007, p.20). "We've been doing this for 10 years. Early in 2000 people were into everything under the sun. They went away after a while," Wilder was quoted as saying. He said Australia had been through the various stages of denial, opposition and indifference. "Now we've had companies come out and say enough is enough. Which of four thorough reports on emissions we've had over the years wasn't right? To have another inquiry now on emissions trading - it's been done to death. We don't have the luxury of time anymore. We are going to have to pull out all stops to fix it." mm

**NUCLEAR****NSW Independent MP blasts nukes:**

Peter Andren, Independent member for Calare, Bathurst, NSW, does not share *AFR's* editorial enthusiasm for carbonated water-wells and blue-glowing swimming pools. Peter Andren's letter in *The Australian Financial Review* (7 February 2007 p59) exclaims, "I note with alarm the *AFR's* editorial (February 5) saying 'the cost of [energy] production almost doubles if we do not include nuclear power and carbon capture and storage in our future energy mix'. The acceptance of these unproven (carbon sequestration) and diabolically dangerous (nuclear) options as part of the solution beggars belief. Where is the technology to safely store the waste from nuclear plants, 70,000 tonnes of which lie in cooling pools at America's nuclear plants with no prospect of safe storage for up to 500,000 years? That's after the venting of dangerously radioactive gases and probably unannounced release of cooling waters during the energy production phase." mm

**LAND & FOREST**

**Investment tax deductions end:** New, speculative non-forestry agricultural schemes will be under pressure from the Australian Tax Office from 1 July, reported *The Australian Financial Review* (7 February 2007 p59). The ATO is set to deny tax breaks to new investors in the schemes. Federal Cabinet yesterday broke its eight-month impasse over the controversial non-forestry plantation schemes when it passed on responsibility for the upfront

tax breaks available to the ATO. The Tax Office draft declaration ruling due will stop upfront tax deductions on non-forestry schemes from 1 July. Mm

**GREEN POWER****Origin bags Green Power contract:**

The GPT Group, including the GPT Wholesale Office Fund (GWOF), had procured 20 gigawatt-hours per annum of Accredited Green Power for 92pc of its office portfolio weighted by floor area. The GPT Group had committed to purchasing 25pc of its energy demand from renewable energy projects such as wind and biomass in NSW, Vic and SA for 92pc of its office portfolio. This 25pc equated to abating approximately 23,000 tonnes of CO<sub>2</sub> per annum. Origin Energy, whose green energy products were ranked as the top performers in the Australian renewable market by the Green Electricity Watch Survey 2006 [endorsed by the Total Environment Centre (TEC), The Australian Conservation Foundation (ACF) and World Wildlife Fund (WWF)], was awarded a 3 year contract which commenced from 1st January, 2007. mm

**CO2 DUMPS**

**Public doesn't get CO<sub>2</sub> dumps:** The Queensland Centre for Low Emission Technology recently completed a stakeholder study on perspectives regarding low emission technologies in Queensland, noted an Australian Coal Association and Minerals Council of Australia submission to the House of Representatives Standing Committee on Science and Innovation Inquiry into

Geosequestration Technology. While this work is only preliminary and the first of a series of similar studies across Australia, initial findings in relation to CCS indicate that a majority of the general community have little awareness or understanding of CCS. When asked what they understood by the term carbon capture and storage, 70 per cent of respondents admitted that they did not know the answer to the question. There is clearly a need for increased education and dialogues around CCS to ensure the public is well informed about its risks and benefits.

**Reference: The Australian Coal Association and The Minerals Council Of Australia Submission: House of Representatives Standing Committee on Science and Innovation Inquiry into Geosequestration Technology, September 2006**

**BP bemoans lack of dump incentive:**

In 2005, BP announced plans for the development of the first industrial-scale project to generate clean electricity from fossil fuels, BP noted in its submission to the House of Representatives Standing Committee on Science and Innovation, September 2006. Possible policy options include: targeted financial support for low carbon energy and CCS (for example, extension of the Low Emissions Technology Demonstration Fund); accelerated depreciation for CCS projects; clear guidance that early movers into CCS will not be disadvantaged by a future greenhouse gas regime; clear guidance around long-term liability for CCS, based on a risk management approach; extension of the Mandatory Renewable Energy Target to include low emission energy generated

from decarbonised fossil fuels; and feed-in tariffs for low carbon energy, as introduced in Germany to drive solar and wind markets. mm

**CARBON TAX****Carbon tax "most efficient answer":**

Despite the notes of caution expressed by the Business Council of Australia, there is no reason for Australia just to sit around and wait for the world to catch up in setting emissions reduction targets, according to 'Chanticleer', in *The Australian Financial Review* (10/2/2007, p.64). If the aim is for the most efficient way to reduce Australia's greenhouse gases and encourage alternate energy sources, then there is no doubt a fossil-fuel tax is the answer. The BCA had argued that Australia would meet its Kyoto target largely because of a reduction in land clearing, which can't be expected to play a major role in the future because there are obviously a finite number of trees that can be chopped down. Essentially, a carbon tax would make alternative fuels cheaper and would put direct pressure on the market, rather than using artificial solutions or longer-term measures like carbon trading schemes. The tax isn't at the top of the BCA's wish list, nor is John Howard likely to go near one, especially as it may hurt his beloved coal mining friends. So that's why other measures, such as the trading scheme, are being developed. mm

**EXXON**

**ExxonMobil turns green:** ExxonMobil, pilloried by Greenpeace throughout the

1990s as an enemy of environmentalism, has been softening its stance on global warming since early 2000, when former chief executive Lee Raymond gave a speech in London that acknowledged the dangers inherent in climate change, reported *The Australian Financial Review* (10 February 2007 p.10). Cohen said: "Many people want to stick us in a bucket that says we want to deny this. That is flat wrong." Scientific research indicated the risks from global warming "warrant action now". ExxonMobil had stopped contributing funds to think tanks such as the conservative Competitive Enterprise Institute. The company's support for such groups was aimed at discouraging heavy-handed approaches to regulating carbon emissions, rather than debunking scientific conclusions, ExxonMobil said. mm

## FINANCE

**Goldman Sachs cashes in:** According to *The Australian Financial Review* (15/2/2007, p. 41), greed is a factor motivating investment banks to join the fight against global warming. New York-based Goldman Sachs made at least \$US68 million (\$88 million) in six months from an investment in Climate Exchange, an emissions trading marketplace that has tripled in value. A consensus is emerging for US legislation that encourages trading of credits earned from projects that reduce emissions of greenhouse gases and reduce global warming. Analyst predict big returns should there be signs of law changes and believe credit values could reach as high as \$US19 a tonne of carbon dioxide, from \$US3.50 now. mm

## INNOVATION

### Tata sells compressed-air engines:

An external combustion of fossil fuel and heating air to drive a car motor by 2008 is planned by IndraNet Technologies, the MDI Group and Tata Motors of India, reported *The Australian Financial Review* (7 February 2007 p16). The company said this external combustion allowed the engine to run exclusively on fossil fuel or renewable fuels such as ethanol. While the car is running on fossil fuels or renewable fuels, the compressor refills the compressed air tanks. mm

## VRET

**Origin calls for more flexibility:** The proposed rules for the Victorian Renewable Energy Target (VRET) might define eligible capacity expansions for existing generators too narrowly, Origin Energy said in a submission to the Essential Services Commission (ESC) of Victoria Origin said this could result in some genuine "new investment" being discouraged. For example, a landfill gas project might operate well below potential capacity factors because it had inadequate gas extraction equipment on site to handle the required volumes. The plant could therefore increase its output with additional equipment, but would do so without increasing its nameplate capacity but the owners of the plant might not undertake this type of investment if it were not recognised under the VRET rules. Origin urged the ESC to consider whether the rules could allow for greater flexibility so as to avoid such unforeseen and undesirable outcomes.

**Reference: Submission from Origin Energy to Essential Services Commission (ESC) of Victoria on the Victorian Renewable Energy Target (VRET) framework paper and draft rules. 25 January 2007.**

### Hydro gens may "pump the system":

Proposed capacity baselines in the Victorian Renewable Energy Target (VRET) were problematic for single hydro and interconnected hydro generators, Babcock and Brown told the Victorian Essential Services Commission (ESC). In its submission on the VRET framework paper and draft rules, Babcock and Brown said this was because of their high annual production variability. Hydro generators with large storage dams could "pump the system" by storing water in one year to be released in the following year to get above their baseline.

**Reference: <http://www.esc.vic.gov.au>**

# green tenders and events

## Tender

**NAT: Department of the Environment and Heritage – Review and Revision of Emission Estimation Materials for the National Pollutant Inventory (NPI).** No: 001-0607DEH-NPI. Contact: Alex Taylor, ph: (02) 6274 2610, email: [npi@deh.gov.au](mailto:npi@deh.gov.au) website: [www.npi.gov.au](http://www.npi.gov.au) *Closing: 30 June 2008*

## Employment

**NAT: Australian Government Antarctic Division - Ice Sheet, Research Scientist.** Responsible for planning, developing and implementing innovative and relevant ice sheet research projects. These could include, but are not limited to, the development and application of high resolution numerical models of the dynamics of outlet glaciers and ice shelves; or the quantitative application of new satellite technology (such as radar and laser altimetry, synthetic aperture radar interferometry, space-borne gravity measurements, etc.) to the determination of ice sheet dynamics and changes in the ice sheet mass. Should have a strong mathematics/physics background and a depth of experience in a relevant aspect of ice sheet research. Salary up to \$80.9k. Contact: Corporate Services Officer, Australian Government Antarctic Division, Channel Highway, Kingston, Tasmania 7050, ph: 1800 030 755 (Attn: Corporate Services Officer), email: [recruitment@aad.gov.au](mailto:recruitment@aad.gov.au) website: <http://www.aad.gov.au/employ> *Closing: 2 March 2007*

**NAT: Bureau of Meteorology - Scientist, Climate & Water.** No: 10368. Under broad policy control and direction, conduct research to understand the impacts of climate change on Australian rainfall and on water resources across Australia; prepare scientific papers for publication in international journals and present the state of knowledge at a range of levels to stakeholders and the public and ensure that

plans, policies and practices in relation to the various elements of the Bureau's Social Justice Strategy are applied in the work area and that training and development programs are implemented for staff. Should have wide research experience and substantial knowledge in a field relevant to Australian climate variability and/or climate change, particularly in relation to rainfall and water resources; demonstrated knowledge and research experience in the use of climate models to improve our understanding of the climate system; an ability to conduct research of a novel, complex or critical nature and ability to communicate clearly with other scientists, stakeholders and the public. Proven written and verbal communication skills. Salary up to \$80.4k. Contact: Recruitment Manager, Bureau of Meteorology, GPO Box 1289, Melbourne VIC 3001, ph: (03) 9669 4260/4583/4333, email: [jobs@bom.gov.au](mailto:jobs@bom.gov.au) website: <http://www.bom.gov.au> *Closing: 8 March 2007*

**NAT: Department of Agriculture, Fisheries and Forestry & Department of the Environment and Water Resources - APS Executive Level 1.** To provide leadership and management expertise to support the operations of a Section within the Australian Government Regional Natural Resource Management Team, including high-level assistance in program management, information management, budget administration and staff supervision; contribute to the development and implementation of high-level policy and program implementation strategies and advice relating to delivery of the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust; prepare and/or supervise the preparation of complex correspondence, briefs, parliamentary and ministerial responses, cabinet submissions and reports and represent the Team and undertake liaison and negotiations with regional natural resource management bodies, Australian Government, State/Territory and local government, Natural Resources Management networks and public and industry interest groups in the promotion and implementation of the National Action Plan and the Natural Heritage Trust. Should have demonstrated high level of skill and

history of achievement in a diverse range of program management and policy development activities, including project planning and leadership, risk assessment and management, conceptual analysis and strategic planning; high level managerial skills and a sound understanding of Government processes and government policies on workplace diversity, occupational health and safety and workplace participation; proven ability to be proactive, self motivated, work under pressure and with limited supervision, meet deadlines and to bring a creative multifaceted approach to complex problem solving; well developed communication (oral and written), networking, negotiation and conflict resolution skills, including proven ability to represent the Department and to build and maintain effective relationships with other staff and organizations and ability to acquire new skills and knowledge as part of the work experience, including the capacity to apply these in a cross-department team environment. Salary up to \$80.9k. Contact: Rebecca Mckenzie, Australian Government NRM Team, GPO Box 787, CANBERRA ACT 2601, ph: (02) 6274 2538 (Attn: Paul Davies), email: nrmcoord@environment.gov.au *Closing: 5 March 2007*

**NAT: Department of the Environment and Water Resources - Director.** No: PN3198. To coordinate and manage the activities of the Section, including staff mentoring and supervision, program planning, budget management, and project and grant administration; provide high-level and strategic policy advice and analysis to the Australian Greenhouse Office Executive and Minister's Office on matters relating to forest sinks and the links between climate change and natural resource management; work in partnership with other sections in the branch and cooperatively with other areas of the Department, other Government agencies and key external stakeholders to further develop whole-of-nation and whole-of-government approaches to forest sinks and climate change in natural resource management and represent the Australian Government, the Department and the Australian Greenhouse Office, and liaise and negotiate on their behalf. Salary up to \$98.3k. Contact: Kay Gordon, Australian Greenhouse Office, Department of the Environment and Water Resources, GPO Box 787, CANBERRA ACT 2601, ph: (02) 6274

1483 (Attn: Jo Mummery), email: kay.gordon@environment.gov.au  
*Closing: 5 March 2007*

**NAT: Department of the Environment and Water Resources - Director, Executive Level 1.** To provide high-level advice in relation to complex legal and policy issues associated with the interpretation and administration of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act); undertake work to further develop and refine the operation of the EPBC Act and the EPBC Regulations, including through the preparation of related policy guidelines and documents; prepare, contribute to and review a wide range of documents associated with the administration of the EPBC Act including those related to legal action, practice notes, briefing material and correspondence and represent the Department at meetings and liaise and negotiate with Government and nongovernment interests as required. Should have familiarity with legislation and demonstrated aptitude for legislative interpretation; good oral and written communication skills in relation to brief writing, preparing policy documents, reports, submissions and correspondence and demonstrated capacity to contribute to the development of policy approaches to a broad range of issues. Tertiary level qualifications in law would be highly regarded. Salary up to \$80.9k. Contact: David Kilham, ph: (02) 6274 2279, email: david.kilham@environment.gov.au  
*Closing: 5 March 2007*

**NAT: Department of the Environment and Water Resources - Environmental Risk Assessor (Chemicals).** No: 23305. To undertake evaluations of agricultural, veterinary or industrial chemicals for their potential risks to the environment and formulate recommendations for control measures to minimise those risks. This includes evaluating the information dossiers provided for these tasks, conducting research for further data and background, and preparing reports and technical advice as required; undertake representation and liaison functions with internal and external clients and prepare briefs and replies to Ministerial and other correspondence. Should have capacity to undertake environmental hazard evaluation and risk assessments of chemicals and provide technical advice on chemical issues, including well

developed analytical and research skills, and a thorough understanding of chemical assessment, chemical regulation, or relevant agricultural or industrial practices; strategic thinking - conceptual, analytical and planning skills of a high order, including good judgement and flexible problem solving ability; ability to build productive networks and establish linking strategies and actions required to achieve tangible results and communicates with influence, especially well developed written and oral communication skills. Qualifications and/or a background in chemistry, chemical engineering or a related discipline are highly desirable. Salary up to \$67.1k. Contact: Greg Plummer, Director, Chemical Assessment Section, Department of Environment and Water Resources, GPO Box 787, Canberra ACT 2601, ph: (02) 6274 1944 (Attn: Val Duffy), email: val.duffy@environment.gov.au website: <http://www.environment.gov.au> *Closing: 12 March 2007*

**NAT: Department of the Environment and Water Resources - Executive Level 1.** No: 19951. To develop and implement national strategies to progress Australia's phase-out of ozone depleting substances and to minimise emissions of ozone depleting substances and their synthetic greenhouse gas replacements; develop end use regulations under the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 for industry sectors which use ozone depleting and/or synthetic greenhouse gases; represent the department at various national and international forums, and liaise with government, industry and international stakeholders; oversight compliance and enforcement activities under the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989; represent Australia's international interests and obligations, particularly through the Montreal Protocol and regional programs, and through managing projects under Australia's Climate Action Partnerships and manage the National Halon Bank and the Ozone Protection and Synthetic Greenhouse Gas Account. Should have demonstrated ability to develop, implement and manage complex Government, Legislation, Policies and Programs; leadership skills, including drive, initiative, and the ability to manage and develop people, and to work cooperatively in a small team; strategic thinking - conceptual, analytical and

planning skills of a high order, including judgement and flexible problem solving ability; communicates with influence, highly developed oral & written skills and demonstrated ability to build productive networks and establish linking strategies and actions required to achieve tangible results. Salary up to \$80.9k. Contact: Patrick McInerney, Environment Quality Division, Department of the Environment and Water Resources, GPO Box 787, CANBERRA ACT 2601, ph: (02) 6274 1035 (Attn: Patrick McInerney), email: [Patrick.mcinerney@environment.gov.au](mailto:Patrick.mcinerney@environment.gov.au) *Closing: 5 March 2007*

**NSW: Department of Environment and Conservation - Manager Resorts.** No: DEC07-056. Responsible for the management of the Alpine Resorts within Kosciuszko National Park to ensure the Resorts are developed and operated in an ecologically sustainable manner and providing village management and municipal services in the Perisher Range Resorts. Should have tertiary qualifications in natural sciences, heritage management, property management or equivalent; understanding of DEC statutory requirements, corporate directions, and the environmental, social and economic external environment of the region; thorough knowledge of property management including commercial leases, licenses, government policy and relevant legislation; demonstrated experience in the cost effective delivery of municipal and health services, water, waste, sewerage and public health and in the management of physical, financial and human resources and knowledge of issues associated with the development and operation of tourism facilities in a sensitive natural environment and ability to interpret a wide range of Acts relevant to planning, conservation and public health issues. Salary up to \$122.7k. Contact: Recruitment Officer, Department of Environment and Conservation, Personnel Services Section, PO Box 1967, Hurstville NSW 2220, ph: (02) 6298 0322 (Attn: Alistair Henschman), email: [Alistair.henschman@environment.nsw.gov.au](mailto:Alistair.henschman@environment.nsw.gov.au) *Closing: 23 February 2007*

**NAT: Department of the Environment and Water Resources - Senior Policy Officer.** No: 2707. To undertake and contribute to environmental reporting including the state of the environment reporting process; identify, aggregate and analyse environmental data as required to produce products for environmental reporting purposes; participate in

representation, liaison, and negotiation activities and prepare technical and research documentation associated with the program. Should have demonstrated ability to manage and understand environmental data, including collation, storage, analysis, product production and interpretation; conceptual, analytical and planning skills including good judgement and flexible problem solving ability; ability to lead, build productive networks and establish linking strategies and actions required to achieve tangible results and well developed written and oral communication skills. Contact: Ms Jenny Boshier, Director, Environment & Sustainability Reporting Section, Department of the Environment and Water Resources, GPO Box 787, Canberra ACT 2601, ph: (02) 6274 2037 (Attn: Jenny Boshier), email: sarah.steele@environment.gov.au *Closing: 5 March 2007*

**QLD: CSIRO - Agro-ecologist, Sustainable Ecosystems, CAIRNS, QLD.** No: 2007/32. To develop and deliver interdisciplinary research projects focused on diversifying agricultural production systems to maintain and enhance economic, social, biodiversity and ecosystem service benefits in humid tropical landscapes of north-eastern Australia and the Asia-Pacific region. Should have a relevant PhD or equivalent documented research experience; research profile demonstrating a track record in interdisciplinary and applied research; proven ability to achieve project goals and objectives; to anticipate, plan and implement change, and a proven ability to establish cooperative partnerships to further research outcomes; excellent interpersonal, written and oral communication skills for establishing and maintaining relationships with staff, management, and stakeholders in industry, funding bodies, government and the general community; knowledge, understanding and commitment to principles of Equal Employment Opportunity, Occupational Health and Safety, Industrial Participation and Diversity. Salary up to \$78k. Contact: CSIRO Careers Online, PO Box 225, DICKSON ACT 2602, ph: 1300 301 509, email: csiro-careers@csiro.au *Closing: 23 February 2007*

**QLD: Environmental Protection Agency - Manager.** No: EN357/07. To manage and provide strategic direction to a multi-disciplinary functional unit to work to deliver specialist tenure advice and a range

of land dealings affected the EPA estate; ensure legislative and custodial responsibilities are met with regards land dealings affecting the EPA estate; oversee project management including projects for external clients to ensure timely delivery of outcomes and manage the strategic interface between other work units in the Tenure Action Branch and other strategic conservation planning initiatives to give effect to nature conservation policies. Should have demonstrated high level ability to lead and manage a major functional unit and implement systems to promote performance management, ethical behaviour and professional development and thorough knowledge and experience of implementing strategic and business systems, overseeing property and tenure dealings, monitoring compliance and performance to deliver the required outcomes, identifying and using tools to achieve policy outcomes and a thorough knowledge or ability to rapidly acquire a thorough knowledge of relevant legislation. Salary up to \$87.9k. Contact: Tim Ellis, ph: (07) 3227 6198, fax: (07) 3225 2237, email: jobvac.epa@csq.qld.gov.au *Closing: 23 February 2007*

**QLD: Environmental Protection Agency - Principal Environmental Officer.** No: EN351/07. To develop and implement strategies for the environmental management of issues impacting on land, air, water and people including air pollution, water pollution, noise pollution and waste management; research and evaluate trends in environmental matters, and provide technical guidance, expertise, support and advice to District staff to ensure a coordinated approach to environmental management with a particular emphasis on the mining industry; assist with the development, implementation and review of operational work programs for staff within the District and advise on the suitability of legislation, policies and guidelines from an operational perspective. Should have demonstrated high level ability to lead and manage a team and implement systems to promote performance management, ethical behaviour/decision-making and professional development; high level knowledge of or ability to rapidly acquire a high level knowledge of environmental management issues including mining and industrial processes and pollution management principles and practices with demonstrated skills in one or more of the following: Environmental planning and impact assessment; Environmental monitoring and

auditing or Waste management practices and demonstrated ability to successfully initiate and implement change and continuous improvement in the work environment. Salary up to \$71.7k. Contact: Michael Rodgerson, ph: (07) 4982 4555, fax: (07) 4938 6967, email: hr.rok@csq.qld.gov.au *Closing: 23 February 2007*

**QLD: Environmental Protection Agency - Senior Project Officer.**

No: EN396/07. To compile and deliver professional maps, plans, illustrations and other priority cartographic and geographic products relating to cadastre and land tenure in Queensland; ensure cartographic and geographic products meet departmental requirements and technical standards required for mapping in Queensland; provide specialist advice on land tenure, property rights, mapping or geographic data; manage projects and lead project teams relevant to the timely delivery of cartographic and geographic information products and services as per project plans and contribute to the maintenance of the unit's historical map collection and associated databases, current registers and databases and provide statistical information on the EPA estates to senior management, external clients and other government Agencies. Should have demonstrated sound level of ability to lead and manage a team and implement systems to promote performance management, ethical behaviour/decision making and professional development; sound knowledge and skills in the use of the latest GIS technologies, and/or the sound knowledge and skills in the use of Adobe Illustrator to deliver cartographic products as well as sound knowledge or the ability to acquire sound knowledge of technical standards and cadastral survey requirements for mapping in Queensland; demonstrated sound analytical, research and problem-solving skills and demonstrated sound communication, consultation, negotiation and liaison skills and skills in providing advice. Salary up to \$63.5k. Contact: Ross Williams, ph: (07) 3406 2125, fax: (07) 3225 2237, email: jovvac.epa@csq.qld.gov.au *Closing: 2 March 2007*

**QLD: Environmental Protection Agency - Team Leader.** No: EN356/07. To lead and assist with strategic direction to a multi-disciplinary functional unit to work to deliver specialist tenure advice

and a range of land dealings affected the EPA estate; ensure legislative and custodial responsibilities are met with regards land dealings affecting the EPA estate; oversee project management including projects for external clients to ensure timely delivery of outcomes and lead and assist with the strategic interface between other work units in the Tenure Action Branch and other strategic conservation planning initiatives to give effect to nature conservation policies. Should have demonstrated high level ability to lead and manage a functional unit and implement systems to promote performance management, ethical behaviour and professional development; high level knowledge of implementing strategic and business systems, overseeing property and tenure dealings, monitoring compliance and performance to deliver the required outcomes, identifying and using tools to achieve policy outcomes and a thorough knowledge or ability to rapidly acquire a thorough knowledge of relevant legislation and demonstrated sound ability to successfully initiate, lead and implement change and continuous improvement in the work environment. Salary up to \$80.4k. Contact: Tim Ellis, ph: (07) 3227 6198, fax: (07) 3225 2237, email: jobvac.epa@csq.qld.gov.au *Closing: 23 February 2007*

**SA: Department for Environment and Heritage - Media & Public Relations Manager.** No: 1044/2007. Responsible for the delivery of a responsive and strategic media management function, development and delivery of pro-active media and public relations planning and strategies, and identification of Departmental media training needs. Should have an appropriate degree in Journalism, Communications or equivalent. Salary up to \$79.4k. Contact: Recruitment Selection Team, Human Resource Service, Department for Environment and Heritage, GPO Box 1047, Adelaide, 5001, ph: (08) 8226 5724 (Attn: Penny Gunner), email: gunner.penny@saugov.sa.gov.au *Closing: 2 March 2007*

**VIC: Department of Tourism, Arts and Environment - Senior Environmental Officer.** No: 705848. To co-ordinate and undertake the environmental assessment and/or ongoing management of environmentally relevant activities, particularly in the areas of the extractive and mining industries (quarries, extractive pits eg. sand or clay and mines eg. open cut, underground or alluvial) according to the

objectives, principles and requirements of the Environmental Management and Pollution Control Act 1994 and other relevant legislation and policies. Should have a degree in Science, Engineering or Environmental Studies or an equivalent qualification from a recognised tertiary institution. Salary up to \$64.7k. Contact: Carmel Keogh, Human Resources, Department of Tourism, Arts and the Environment, GPO Box 771, Hobart, Tas 7001, ph: (03) 6233 6504 (Attn: Sally Arnold), email: Sally.Arnold@environment.tas.gov.au *Closing: 2 March 2007*

**VIC: The Nature Conservancy - Director of Conservation Australia.** To oversee aspects of protection, science, stewardship, and community relations for Australia program projects, provide scientific leadership and support for TNC's conservation planning work and establish overall conservation priorities in the region. Should have at least 5 years' experience working in international environmental issues, demonstrated experience in fundraising and developing, directing and managing multiple projects. Contact: Michael Looker, email: mlooker@tnc.org website: <http://www.nature.org/careers> *Closing: 9 March 2007*

**WA: Department for Planning and Infrastructure - Senior Environmental Planners.** No: 20020289. Responsible for providing technical advice and managing multi-disciplinary projects on a range of environmental planning aspects of development and strategic and statutory planning applications for DPI, the Western Australian Planning Commission, other government agencies, local government authorities and the public and investigating and reporting on the environment planning and natural resource management aspects of strategies, policies and strategic and statutory plans. Salary up to \$78.1k. Contact: Human Resource Officer, Department for Planning and Infrastructure, Employment Services, GPO Box C102, Perth 6839, ph: (08) 9264 7574 (Attn: Vivienne Panizza), website: <http://www.jobs.wa.gov.au> *Closing: 26 February 2007*

**WA: Department for Planning and Infrastructure - Senior Policy Officer (Sustainability).** No: 20030320. To develop, analyse and evaluate policies, strategies and guidelines to ensure the implementation of the State Sustainability Strategy objectives,

sustainability and greenhouse reduction initiatives within the planning framework; liaise and consult with key internal & external stakeholders in regard to the implementation of sustainability initiatives and research and investigate sustainability issues, trends, opportunities and barriers. Salary up to \$64.4k. Contact: Human Resource Officer, Department for Planning and Infrastructure, Employment Services, GPO Box C102, Perth 6839, ph: (08) 9264 7977 (Attn: Bryce Bunny), fax: (08) 9216 8610, website: <http://www.jobs.wa.gov.au> *Closing: 26 February 2007*

**WA: Department of Environment and Conservation - Environmental Officer (Assessment).** No: DEC0329. To investigate, prepares reports and develops recommendations on environmental and planning implications of planning issues; assists with the review and preparation of Trust policies and provides advice to proponents of development, other organisations and the general public on Trust procedures and policies on planning related matters. Should have tertiary qualifications in urban and regional planning, environmental science or other relevant qualification; writing skills applicable to the preparation of reports and correspondence; conceptual and analytical skills; knowledge of environmental assessment, investigations or management planning; communication and interpersonal skills applicable to working in a team and negotiating with developers, local and state government officers and the community and "C" class driver's licence or eligibility to obtain a driver's licence. Salary up to \$55.3k. Contact: Paul Stephens, ph: (08) 9278 0920, website: <http://www.jobs.wa.gov.au> *Closing: 5 March 2007*

## Conferences & Events

**26 February-2 March 2007. CSD Intergovernmental Preparatory Meeting.** New York, U.S.A. Contact: UN Division for Sustainable Development, ph: +1 212 963 8102, fax: +1 212 963 4260, email: [dsd@un.org](mailto:dsd@un.org) website: <http://www.un.org>

**4-11 March 2007. Second International Agarwood Conference.** Bangkok, Thailand. Contact: Rainforest Project Foundation, ph: +31 20 624 8508, fax: +31 20 624 0588, email: [trp@euronet.nl](mailto:trp@euronet.nl) website: <http://www.rainforestproject.net>

**12-16 March 2007. Eighteenth Session of the FAO Committee on Forestry (COFO).** Rome, Italy. Contact: Douglas Kneeland, FAO Forestry Department, ph: +39 06 5705 3925, fax: +39 06 5705 5137, email: douglas.kneeland@fao.org website: <http://www.fao.org>

**13-15 March 2007. Carbon Market Insights 2007.** Copenhagen, Denmark. Contact: Point Carbon, ph: +47 2240 5340, fax: +47 2240 5341, email: conference@pointcarbon.com website: <http://www.pointcarbon.com>

**19-23 March 2007. Rotterdam Convention Third Chemical Review Committee Meeting.** Rome, Italy. Contact: Rotterdam Convention Secretariat, ph: +41 22 917 8296, fax: +41 22 917 8082, email: pic@pic.int website: <http://www.pic.int>

**26-28 March 2007. Queensland Energy.** Carlton Crest, Brisbane, Australia. Contact: Customer Service, IIR, ph: (02) 9080 4090, email: info@iir.com.au

**26-30 March 2007. Spillcon 2007: Asia Pacific's Premier Marine Environmental Protection, Prevention and Response Conference.** Burswood Entertainment Complex, Perth, Western Australia. Contact: Conference Coordination Service, GPO Box 2181, Canberra City ACT 2601, ph: (02) 6279 5616, fax: (02) 6279 5026, email: spillcon@amsa.gov.au

**29-30 March 2007. Clean Coal 2007.** Carlton Crest, Brisbane, Australia. Contact: Customer Service, IIR, ph: (02) 9080 4090, email: info@iir.com.au

**16-27 April 2007. Seventh Session of the United Nations Forum on Forests.** New York, U.S.A. Contact: UNFF Secretariat, ph: + 212 963 3160, fax: + 917 367 3186, email: unff@un.org website: <http://www.un.org>

**25-27 April 2007. Second Meeting of the Open-Ended Ad Hoc Working Group on Non-Compliance.** Dakar, Senegal. Contact: Stockholm Convention Secretariat, ph: +41 22 917 8191, fax: +41 22 797 3460, email: ssc@pops.int website: <http://www.chem.unep.ch>

**30 April-3 May 2007. Meetings of the Intergovernmental Panel On Climate Change.** Bangkok, Thailand. Contact: Rudie Bourgeois, IPCC Secretariat, ph: +41-22-730-8208, fax: +41-22-730-8025/13, email: IPCC-Sec@wmo.int website: <http://www.ipcc.ch/>

**30 April-4 May 2007. Stockholm Convention COP-3.** Dakar, Senegal. Contact: Stockholm Convention Secretariat, ph: +41 22 917 8191, fax: +41 22 797 3460, email: ssc@pops.int website: <http://www.pops.int>

**1-3 May 2007. 8th Annual WA Power 2007.** Sheraton Hotel, Perth, Australia. Contact: Heik-Heng Tan, ph: (02) 9005 0714, fax: (02) 9281 3950, email: teik-heng.tan@terrapinn.com

**4 May 2007. 26th Session of The Intergovernmental Panel on Climate Change.** Bangkok, Thailand. Contact: Rudie Bourgeois, IPCC Secretariat, ph: +41-22-730-8208, fax: +41-22-730-8025/13, email: IPCC-Sec@wmo.int website: <http://www.ipcc.ch/>

**7-18 May 2007. 26th Sessions of The UNFCCC Subsidiary Bodies and Kyoto Protocol Ad Hoc Working Group.** Bonn, Germany. Contact: UN Framework Convention on Climate Change (UNFCCC) Secretariat, ph: +49-228-815-1000, fax: +49-228-815-1999, email: secretariat@unfccc.int website: <http://www.unfccc.int>

**9-10 May 2007. BCSE 5th Annual National Conference and Exhibition.** Sydney, Australia. Contact: Australian Business Council for Sustainable Energy, ph: (03) 9349 3077, fax: (03) 9349 3049, email: events@bcse.org.au

**14-18 May 2007. World Trade Fair for Forestry and Wood Industries.** Hannover, Germany. Contact: Anja Brokjans, ph: +49 511 31602, fax: +49 511 89 32631, email: anja.brokjans@messe.de website: <http://www.ligna.de>

**20-22 June 2007. Expert Meeting on Regional Impacts, Adaptation, Vulnerability and Mitigation.** Nadi, Fiji. Contact: IPCC Secretariat, ph: +41 22 730 8208, fax: +41 22 730 8025, email: ipcc-wgl@al.no.gov website: [ipcc-wgl.ucar.edu/meeting/TGICA-Regional/](http://ipcc-wgl.ucar.edu/meeting/TGICA-Regional/)

**9-13 September 2007. IUAPPA World Clean Air Congress: Clean Air Partnerships: Coming together for the Future.** Brisbane Convention and Exhibition Centre, Brisbane, Queensland, Australia. Contact: ICMS Pty Ltd, ph: (07) 3307 4000, fax: (07) 3844 0909, website: <http://www.iuappa2007.com>

**31 October-2 November 2007. SSEE Conference 2007: International Conference on Engineering Sustainability.** Perth, Western Australia. Contact: Keynote Conferences, ph: (08) 9382 3799, website: <http://www.keynotewa.com/ssee-07>

**3-14 December 2007. Thirteenth Conference of the Parties to the UNFCCC and Third Meeting of the Parties to the Kyoto Protocol.** Indonesia. Contact: UNFCCC Secretariat, ph: +49 228 815 1000, fax: +49 228 815 1999, email: [secretariat@unfccc.int](mailto:secretariat@unfccc.int) website: <http://www.unfccc.int>