

ITER Forum Website – News Log. March 2009

Solar isn't a total solution: Tanner

The West Australian. 27th March 2009, 16:21 WST

<http://www.thewest.com.au/aapstory.aspx?StoryName=561236>

The environment lobby's obsession with solar energy is not the only answer to delivering efficient renewable solutions, Finance Minister Lindsay Tanner says.

Launching a report on the hidden costs of electricity, Mr Tanner described public debate on renewable energy as 'quite simplistic'.

While many Australians have some understanding of the social and environmental costs of the generation and distribution of electricity, he said most would not be aware of the substantial costs involved.

'There is such an obsession with all things solar in the wider public debate at the moment that in some instances people will be zealous advocates for solar solutions to things when in fact there are far more efficient alternatives that are renewable, that are better for the particular application to deal with than a solar approach,' Mr Tanner told the launch in Melbourne on Friday.

He recalled that as a seven-year-old, the advent of electricity in country Victoria was something of a novelty.

But the enormous cost of maintaining the state's vast empire of electricity wires and poles needs rethinking, Mr Tanner said.

'We take the structure of our electricity sector for granted,' he said.

'For many years we in our society have done very little thinking about alternative ways of producing the power that we need to go about our ordinary activities.'

The report, authored by the Australian Academy of Technological Sciences and Engineering (ATSE), recommends investment in lower-emission technologies on a massive scale to reduce greenhouse gas emissions.

It said the social and environmental costs of future technologies need to be better understood to shape Australia's energy policies.

The report also said the health risks from Australia's power station emissions cost the nation about \$2.6 billion a year.

Greenpeace climate campaigner Simon Roz said renewable energy from a clean source like wind did not have the associated health risks of dirty brown coal used in Australia to produce electricity.

Welcoming the report, he said it confirmed what the residents of coal communities like the Hunter Valley had known for decades.

'We can now prove that coal pollution increases the incidence of respiratory disease and cardiovascular disease,' Mr Roz said in a statement.

'Renewable energy from clean sources like wind and solar does not have the associated health risks that dirty coal does.'

The health risks associated with burning coal to generate power should to be phased out and replaced with clean, renewable energy, Greenpeace said.

AAP

Carbon trade to cost 35,000 jobs: miners.

The West Australian 28th March 2009, 6:00 WST

<http://www.thewest.com.au/default.aspx?MenuId=146&ContentID=132767>

The emissions trading scheme would wipe out up to 35,000 jobs from regional Australia and impose costs of up to \$2 billion per year on the resources industry, according to the nation's peak mining body.

In a submission to a Senate inquiry, the Minerals Council of Australia says it used Treasury estimates that the ETS would slash coal output by 35 per cent by 2020 and similar industry estimates for other sectors.

The council says the scheme would burden Australian firms with costs their overseas counterparts would not face, all for a 'negligible environmental impact'.

It wants Canberra to adopt a phased ETS introduction.

WA Sustainable Energy Association chief Rau Wills said the submission was 'one-dimensional'.

PETER KERR

Lasers to create mini sun in hunt for clean energy. Physicists hope to develop the first form of nuclear fusion technology by firing laser beams at a pellet of hydrogen

Chris Gourlay and Jonathan Leake. From The Sunday Times. March 15, 2009

<http://www.timesonline.co.uk/tol/news/uk/science/article5908490.ece>

SCIENTISTS are to use the world's most powerful laser system to replicate the fiery core of the sun in experiments that may ultimately offer humanity a clean source of energy.

After more than 50 years of experimentation, physicists are hoping to develop the first form of nuclear fusion technology that produces more energy than it consumes.

Within the next fortnight, researchers at the National Ignition Facility (NIF) in California will fire 192 separate laser beams capable of generating 500 trillion watts - 1,000 times the power of the US national grid - for a fraction of a second.

The energy pulse will be concentrated on a tiny pellet of hydrogen in an attempt to mimic the reactions that take place inside the sun.

The scientists hope to refine the process over the next year until they trigger a nuclear reaction capable of producing large amounts of energy.

'We hope the ignition experiments will show that we can generate more power than we put in and that fusion can be the source of a supply of carbon-free energy,' said Ed Moses, director of the NIF.

'I think the old joke about fusion being just 50 years away, no matter when you ask, is about to become defunct.

'If we succeed, public perception of fusion will change because it is the ultimate energy source - no carbon, limitless, safe and secure.'

NIF was built to test designs for thermonuclear weapons. However, its research will also show how fusion might be used as a peaceful source of energy.

It is among a handful of international projects focused on delivering nuclear fusion.

In France, work has begun on building the £8 billion Iter fusion project, which uses magnetic fields rather than lasers to create the conditions for fusion. However, Iter's first 'burn', or reaction, is not expected until 2022.

A British-led fusion project, the high power laser programme (HiPER), is expected to build a reactor at the Rutherford Appleton Laboratory (RAL) in Oxfordshire by 2020.

The fusion process mimics reactions that take place inside the sun. Unlike nuclear fission reactions - in which atoms are split apart - the fusion process squeezes atoms together under enormous pressures and temperatures until they fuse, releasing huge quantities of energy.

'It's long been said by scientists that fusion is just around the corner,' said John Collier, head of the HiPER project. 'But if the NIF gets it right, I think we've overcome the critical hurdle by showing that we can gain more energy than we put into the reaction.'

The next step would be to create a reactor capable of producing a steady stream of energy.

'The limitation with NIF is you can only fire it around once a month,' said Collier. 'HiPER is designed to look at the next step - designing a prototype to show this technology can be commercially viable.'

Even if scientists are able to tame fusion reactions, most experts believe we would still be at least 25 years away from being able to build fusion power stations that could provide a clean alternative to fossil fuels.

Such power stations would use hydrogen atoms extracted from sea water as fuel to generate carbon-free electricity with minimal radioactive waste.

Last week leading scientists issued a plea to politicians to take action on climate change now or face decades of war and social unrest and a planet that becomes unrecognisable.

Mike Dunne, a director at RAL, believes the time has come to invest in nuclear fusion. 'If the NIF succeeds, as we expect it to, I fully expect a dramatic public and political response,' he said.

'But to fully take advantage of its success, politicians must start investing in fusion now.

'We probably need around £10 billion internationally. That's obviously a large sum but, to put it into context, the global energy market is worth around £1.4 trillion annually.'

However, the NIF experiment is not without controversy. The Californian facility's primary purpose is to allow munitions to be tested without a radioactive fallout, which would contravene the nuclear test ban treaty.

Critics fear the US military is using the NIF complex to develop a new generation of advanced nuclear weapons, although a spokesman for the facility denied this.

Additional reporting: Helen Brooks

Fusion race

Research centres around the world are racing to harness nuclear fusion as a clean power source. They include: National Ignition Facility (California, US) Joint European Torus (Oxford, UK) Iter (Cadarache, France) HiPER (Oxfordshire)

Consumers beware the costly spin of wind turbines. Jonathan Leake, Environment Editor

From The Sunday Times. March 29, 2009

<http://www.timesonline.co.uk/tol/news/environment/article5992864.ece>

The view from the top could not be clearer: Ed Miliband, the minister for energy and climate change, said last week that opposing the onward march of wind turbines 'on which the government is pinning its hopes of meeting its targets on renewable energy' should be as 'socially unacceptable' as not wearing a seatbelt or failing to stop at a zebra crossing.

Hmm. Tell that to the people who believe the view over Britain's last remaining wildernesses is about to be destroyed for ever 'and for a very dubious set of returns. Will wind farms turn out to be a truly revolutionary source of energy for the future or an expensive folly'

Whatever the final answer, there's no doubt about the expense. Over the past decade developers have grown rich on lavish 'and, critics would say, misdirected' government subsidies. Wind farming is the new gold rush.

So far, renewable power companies have erected 2,390 wind turbines at 200 onshore sites. Another 4,800 are planned, with many more to follow. The power generated will be carried away by lines of pylons crossing Snowdonia national park and areas of outstanding natural beauty in Anglesey, Kent, Lincolnshire and Somerset. For enthusiasts such as Miliband, this destruction is the price Britain must pay.

Alas, it's not the only price. A quick calculation shows just how lucrative wind farms can be for the lucky few: take the output of a 3-megawatt (MW) turbine, standing about 550ft high. In a good wind it can generate enough power to meet the annual needs of about 1,600 households.

The owner of such a machine could expect to sell the 9,200MW hours of power generated in a year for about £331,000 at today's prices. Not bad, but the real profit lies elsewhere, in the form of little bits of paper known as renewable obligation certificates (Rocs). Under a government scheme, the wind farmer is allowed to 'create' one Roc for each megawatt hour of electricity generated 'and to charge the consumer for doing so.

Currently each Roc is worth £48, so our 3MW turbine is generating an additional £441,600 each year, simply from the sale of Rocs. Add this all together and that one machine will earn £772,600 a year, or just under £20m over a typical 25-year lifetime ' assuming the subsidies continue at the same rate. And it will have cost only around £3m£4m to build.

In other European Union countries the payback can be even more astonishing. Germany subsidises renewable power generation through the so-called 'feed-in tariff' (Fit). Anyone generating solar, wind-powered or hydro electricity gets a guaranteed payment of four times the market rate ' about 35p a unit ' for 20 years.

The cost is spread among users so that only '1.50 (£1.40) is added to the average bill a month. The German system is deemed so successful that Fits have been adopted in 19 countries and the recent Climate Change Act allows for their introduction here.

In Britain, however, while the government has thrown money at renewable energy generators, it seems not to have anticipated the huge additional costs that wind brings with it.

The problem is this: wind does not blow all the time, so if Britain is to keep the lights on when the breeze slackens, wind power needs support from other forms of power. This means that for every wind farm we build, there must be a coal or gas-fired power station waiting in the wings to take over.

Right now Britain has about 76 gigawatts (GW) of generating capacity, mostly nuclear, coal and gas. The government has said it wants 30GW of our power to come from wind by 2030, but to achieve that it will also have to build or maintain an extra 30GW of back-up power stations. So by 2030 Britain will have to sustain power stations capable of generating 100GW of electricity to provide the power we now get from 76GW.

Then there are the new European Union regulations, which stipulate that Britain must get 15% of its energy from renewable sources by 2020. To meet this target overall will mean producing some 30% of our electricity from renewables ' and wind is the only mature technology able to deliver it.

Dieter Helm, professor of energy policy at Oxford University, believes this is too ambitious. 'We could build and install the thousands of turbines and back-up power stations needed, but only at great cost,' he says. 'It is bound to fail but no one dares talk about that ' or not yet.'

The other thing government does not like to talk about is the cost to consumers. At the moment, subsidising wind turbines adds £12 to the typical annual domestic power bill of £474. This is small now but will surge as more turbines are built.

Will it be worth it? The renewables obligation, by the way, is just one of the charges for dealing with climate change already being added to our energy bills. The average power and gas consumer is already paying an annual extra £31 for carbon permits, under the EU emissions trading scheme, and another £38 for the UK government's carbon emission reductions programme, which subsidises home energy efficiency programmes.

Many wonder if such mounting charges are politically sustainable. A couple of years ago Ofgem, the energy regulator, warned the government that the renewables obligation system was handing wind farm operators windfall profits that could provoke a consumer backlash ' perhaps one as angry as the fuel tax protests of 2000. What price then for Miliband's bleats about the 'social unacceptability' of opposing wind power'

Cost Works Against Alternative and Renewable Energy Sources in Time of Recession

By MATTHEW L. WALD. New York Times. Published: March 28, 2009

http://www.nytimes.com/2009/03/29/business/energy-environment/29renew.html?_r=1&scp=1&sq=%20energy%20sources&st=cse

WASHINGTON ' Windmills and solar panel arrays have become symbols of America's growing interest in alternative energy. Yet as Congress begins debating new rules to restrict carbon dioxide emissions and promote electricity produced from renewable sources, an underlying question is how much more Americans will be willing to pay to harness the wind and the sun.

Curbing carbon dioxide emissions ‘ a central part of tackling [climate change](#) ‘ will almost certainly raise electricity prices, experts say. And increasing the nation’s reliance on renewable energy will in itself raise costs.

Fifteen months into a recession, that prospect does not sit well in some quarters.

‘Consumers right now are extremely price-sensitive,’ said Barry Moline, executive director of the Florida Municipal Electric Association, whose member utilities serve about three million people.

Federal efforts to rein in carbon dioxide emissions are starting to seem inevitable. The [Environmental Protection Agency](#) last week moved to regulate heat-trapping gases as harmful pollutants. And the Obama administration and Democratic leaders in Congress are hoping to push through a cap-and-trade bill that would force polluters to curb their emissions or buy permits from cleaner producers. Congress is also discussing whether to require that a certain percentage of the nation’s electricity come from renewable sources.

The effect of any these measures will be to increase the cost of electricity. Regulation of carbon dioxide emissions will increase the cost of burning [coal](#), a carbon-heavy energy source and currently the cheapest form of fossil fuel. Higher production costs will result in higher electricity rates.

A quota for renewable energy sources will also raise rates because utilities will pass on increased costs to consumers.

And wind and [solar power](#) are generally more expensive than the fossil fuels they are meant to supplant. If carbon dioxide penalties made coal power more expensive, as some environmentalists argue is inevitable, the relative cost of renewable energy might decrease. But consumers will still pay more.

One big question is how much it currently costs companies to produce coal-fired energy, and the answers are often colored by ideology or self-interest. Companies that sell coal or rely on coal-fired electricity often pick a low number; environmentalists cite the indirect costs to society, like strip mining or spills of coal ash. And since the electricity industry became more competitive, the utilities, even municipal ones, have become more secretive about their costs.

Some experts not aligned with either camp estimate that wind power is currently more than 50 percent more expensive than power generated by a traditional coal plant. Built into the calculation is the need for utilities that rely heavily on wind power to build backup plants fired by [natural gas](#) to meet electricity demand when winds are calm.

Another obstacle to nailing the numbers is that prices for coal and natural gas go through market swings. If the price of natural gas gets high enough, wind could look cheap by comparison, but right now natural gas is down sharply ‘ a sign that the recession will not be kind to renewable energy. Organizations that profess to be neutral about what new technology gets built suggest that renewable energy probably has a steep hill to climb.

For example, the Electric Power Research Institute, a nonprofit consortium financed by investor- and publicly-owned utilities, predicted in November that even for plants coming on line in 2015, [wind energy](#) would cost nearly one-third more than coal and about 14 percent more than natural gas. The cost of solar thermal electricity, made by using the sun’s heat to boil water and spin a turbine, would be nearly three times that of coal and more than twice that of natural gas. (It would be almost double the cost of wind energy, too.)

The institute’s study looked only at utility-scale power plants, not the solar photovoltaic cells used in far smaller rooftop installations. Power from photovoltaic cells is generally more expensive than solar thermal power.

At Black & Veatch, a company based in Overland Park, Kan., that has been involved in the construction of coal, gas and wind plants, analysts recently compared the costs per kilowatt-hour of different energy sources for the big energy competitors. A kilowatt-hour is the unit of energy that the utilities use to bill homeowners, with the current retail cost averaging around 11 cents.

A modern coal plant of conventional design, without technology to capture carbon dioxide before it reaches the air, produces at about 7.8 cents a kilowatt-hour; a high-efficiency natural gas plant, 10.6 cents; and a new nuclear reactor, 10.8 cents. A wind plant in a favorable location would cost 9.9 cents per kilowatt hour. But if a utility relied on a great many wind machines, it would need to back them up with conventional generators in places where

demand tends to peak on hot summer days with no breeze. That pushes the price up to just over 12 cents, making it more than 50 percent more expensive than a kilowatt-hour for coal.

No one likes higher bills. But the pain might not be shared equally: despite modest rate breaks for low-income customers, poor people spend a higher portion of their income on electricity than the rich.

'There are great benefits to the use of alternative energy,' said Jonathan Mir, co-head of the North American power utilities group at the investment bank Lazard.

But if Congress neglects the social issue, Mr. Mir said, a change in policy could fall hardest on those without a safety net.

'If it is deployed in an uneconomic way,' he said, 'it is quite regressive in nature.'

Companies Earn Big Profits From Free Carbon Credit

March 9, 2009, 8:05 AM. s. By James Kanter. New York Times

<http://greeninc.blogs.nytimes.com/tag/european-emissions-trading-system/?scp=4&sq=Emissions%20trading&st=cse>

Discussion of carbon cap-and-trade systems usually focuses on whether such schemes can set a workable price for permits, given the volatility that has characterized the system in Europe.

Companies are concerned that issuing too few permits will make them costly and force industry to spend a lot of money to clean up their operations. Environmentalists are concerned that issuing too many permits would make them cheap and allow companies and industry to get away with doing too little remediation.

But an arguably more fundamental issue concerns permits that are given away, rather than sold at auction.

In Europe, power generators have been charging customers for these permits even though they received them free. This practice has earned some of the heaviest emitters of CO2 billions of extra euros since 2005.

Europe's power companies are set to receive up to 71 billion euros (or roughly \$90 billion) over the next four years, according to Point Carbon and WWF 'two organizations tracking the market. And because permits still will be given away free in parts of Eastern Europe after 2012, the windfall profits are set to continue for coal generators there until at least 2020.

Under the European system, steel companies and other manufacturers also received their permits free. But they faced low-cost overseas competition and thus could not afford to raise their prices like companies producing electricity 'a commodity that is mostly produced and consumed nationally or sometimes regionally.

During his election campaign, President Barack Obama pledged to institute a system in the United States where all permits would be auctioned. That could avoid the mind bogglingly large windfall profits made by utilities in Europe.

Whether Mr. Obama can keep to that pledge remains to be seen. The head of the nation's largest burner of coal for power generation last week signaled his group's determination to fight for a significant chunk of free allowances under any United States system, according to Reuters.

'If you auction all of the credits, then it's just a carbon tax,' Michael Morris, the chief executive of American Electric Power, was reported as saying. 'So let's forget the game. Let's call it a carbon tax, and let's see if the populace wants to have a carbon tax,' he said.

Japanese scientists cool on theories

Peter Alford, Tokyo correspondent | March 14, 2009. Article from: [The Australian](#)

<http://www.theaustralian.news.com.au/story/0,,25182520-11949,00.html>

Three senior Japanese scientists separately engaged in climate-change research have strongly questioned the validity of the man-made global-warming model that underpins the drive by the UN and most developed-nation governments to curb greenhouse gas emissions.

'I believe the anthropogenic (man-made) effect for climate change is still only one of the hypotheses to explain the variability of climate,' Kanya Kusano told The Weekend Australian. It could take 10 to 20 years more research to prove or disprove the theory of anthropogenic climate change, said Dr Kusano, a research group leader with the Japan Agency for Marine-Earth Science's Earth Simulator project.

'Before anyone noticed, this hypothesis has been substituted for truth,' writes Shunichi Akasofu, founding director of the University of Alaska's International Arctic Research Centre.

Dr Kusano, Dr Akasofu and Tokyo Institute of Technology geology professor Shigenori Maruyama are highly critical of the UN Intergovernmental Panel on Climate Change's acceptance that hazardous global warming results mainly from man-made gas emissions.

On the scientific evidence so far, according to Dr Kusano, the IPCC assertion that atmospheric temperatures are likely to increase continuously and steadily 'should be perceived as an unprovable hypothesis'.

Dr Maruyama said yesterday there was widespread scepticism among his colleagues about the IPCC's fourth and latest assessment report that most of the observed global temperature increase since the mid-20th century 'is very likely due to the observed increase in anthropogenic greenhouse gas concentrations'.

When this question was raised at a Japan Geoscience Union symposium last year, he said, 'the result showed 90 per cent of the participants do not believe the IPCC report'.

Dr Maruyama studies the geological evidence of prehistoric climate change, and he thinks the large influences on global climate over time may be global cosmic rays and solar activity.

Like Dr Akasofu, Dr Maruyama believes the earth has moved into a cooling period, and while Japan is spending hundreds of millions of dollars on carbon credits to hedge against global warming, the country's greatest looming problem is energy shortage, particularly oil.

'Our nation must pay huge amounts of money to buy carbon discharge rights,' he said. 'This is not reasonable, but meaningless if global cooling will come soon -- scientists will lose trust.'

Dr Maruyama said he was uncomfortable, given the scientific uncertainty of man-made climate-change theory, that Japan had taken a leading position in the crusade for global greenhouse emission targets.

The scientists and two others -- Seita Emori, of the National Institute of Environmental Studies, and Kiminori Ito, of Yokohama National University -- contributed to a paper titled 'The scientific truth of global warming' that was published in January by the Japan Society of Energy and Resources.

Professor Emori is a firm supporter of man-made climate-change theory and Dr Ito is generally for it, although with reservations about the scientific rigour of the IPCC approach.

The doubters, particularly Dr Kusano and Dr Akasofu, are being widely cited by greenhouse-sceptic websites, after their sections of the paper were translated by The Register, a London-based online publisher.

However, the paper's co-ordinator said the JSER's position on anthropogenic global warming was neutral.

'This paper represents the views of the individuals and not of the society,' said Hideo Yoshida, of Kyoto University. 'The purpose is to stimulate debate among scholars and readers, and let them form their own judgment.'

The Japan Society of Energy and Resources is an academic group that promotes co-operation between industry, academic research and government.

Dr Maruyama said many scientists were doubtful about man-made climate-change theory, but did not want to risk their funding from the government or bad publicity from the mass media, which he said was leading society in the wrong direction.

Govt denies ETS threatens regional jobs.

17th March 2009, 14:41 WST. The West Australian

<http://www.thewest.com.au/aapstory.aspx?StoryName=558695>

The federal government says it has sufficient assistance measures in place to help regional areas of Australia take up its proposed emissions trading scheme (ETS).

Labor is under pressure from the mayors of three of the nation's biggest mining cities to delay the scheme's planned 2010 start-up date.

The mayors of Newcastle, Gladstone and Mount Isa say the scheme will cost jobs and seriously damage key regional areas.

Nationals Leader Warren Truss has warned that thousands of jobs in regional areas will be lost the day an ETS is given the go-ahead.

Power stations and coal mines had no chance of surviving the scheme, Mr Truss said.

'They are likely to close almost immediately an ETS is announced,' he told reporters.

'Thousands of jobs will be lost on day one.'

Any regional city with industries such as food processing and manufacturing would suffer job losses, he said.

Liberal frontbencher Bob Baldwin, whose electorate is located in the NSW Hunter Valley, says the Labor 'heartland' mayors are rightfully concerned about jobs.

'The mayor of Newcastle is speaking out of the concerns of the people... he understands that thousands of jobs will disappear,' he told reporters.

Liberal MP Barry Haase said local councils wanted the opposition to get 'stuck into' the government over the scheme.

'There is a great deal of discontent,' he told reporters, adding Prime Minister Kevin Rudd would suffer a voter backlash.

Opposition frontbencher Andrew Southcott said the government must be up front about job losses.

Greens senator Christine Milne accused mining giant Xstrata of conducting a 'cynical political exercise' in suggesting thousands of jobs would be lost because of emissions trading.

The company's prediction was an attempt to influence the outcome of Saturday's Queensland election, and undermine the federal government on climate change action.

'(It) is just like big tobacco standing in a cancer ward telling patients they should die in order to maintain jobs in the tobacco industry,' Senator Milne told reporters.

'No group of people had been better treated under the planned ETS than the coal industry,' she said.

Prime Minister Kevin Rudd told parliament on Tuesday there was a raft of assistance measures in place for emissions-intensive and other exposed industries, as well as for households to become more environmentally-friendly.

'We believe that this set of measures provides an appropriate framework to assist economies in transition moving to a lower carbon economy,' he said.

'It gets the balance right between acting for the environment and acting for jobs.'

AAP

Emissions trading scheme hits brick wall

16th March 2009, 17:17 WST. The West Australian

<http://www.thewest.com.au/aapstory.aspx?StoryName=558456>

Plans for emissions trading have hit a brick wall after a majority of senators said they would vote against the government's scheme.

The opposition and independent Senator Nick Xenophon say they will not support the emissions trading scheme (ETS) in its current form, leaving the government without enough votes to pass it.

This casts doubt on whether the scheme can start by July 2010, as the government promised.

Opposition leader Malcolm Turnbull has hardened his opposition to the scheme in recent days and Senator Xenophon is no fan of the ETS.

'So it should be pretty clear to the government now that in its current form this legislation won't pass the Senate,' Senator Xenophon said on Monday.

The Australian Greens have indicated they are unlikely to support the scheme unless it is greened up.

In question time on Monday, Mr Turnbull focused on the jobs that could be lost if the scheme was not properly thought through.

He said coal giant Xstrata estimated the ETS would cost 1,000 jobs and up to \$7 billion in investment.

'What does the prime minister say to the 1,000 working families he is turning into redundancy families?' Mr Turnbull said.

Opposition emissions trading spokesman Andrew Robb said aluminium company Alcoa had warned 1,800 jobs could go overseas.

Prime Minister Kevin Rudd hit back at the criticism and said it was right to tackle climate change.

He poured scorn on Mr Turnbull's new stance, saying he used to be an advocate of emissions trading.

The opposition was all 'flip, flop, flap on climate change policy', Mr Rudd told parliament.

He ran into trouble when he said Xstrata would qualify for a particular kind of compensation under the ETS.

Xstrata's coal operations will not qualify for that compensation and Mr Turnbull pounced on the error.

'If the prime minister does not understand his own ETS ... who does understand the scheme?' Mr Turnbull said.

The opposition's new climate policy, revealed by Mr Turnbull at the weekend, is to delay emissions trading until 2012.

No scheme should be developed until after United Nations climate talks at the end of this year, the opposition says.

They have vowed to vote against the government's scheme.

Labor does not have a majority in the Senate, so needs the support of the Australian Greens and both crossbench senators to get the ETS passed if the opposition votes against it.

The economic crisis has fuelled opposition to emissions trading, with critics saying now is not the time to put an extra levy on business.

AAP

Regional climate change science program opened

23rd March 2009, 16:00 WST. The West Australian

<http://www.thewest.com.au/default.aspx?MenuId=2&ContentID=131910>

A \$20 million science program to help Australia's neighbours understand the impacts of climate change was flagged by climate change minister Penny Wong at the opening of a national greenhouse conference in Perth this morning.

Greenhouse 2009: Climate Change and Resources will draw together national and international climate experts to discuss climate impacts, mitigation and adaptation strategies for industry, government and households.

Key presenters include Dr Andrew Ash, director of Climate Adaptation Flagship, Dr Bryson Bates from CSIRO Marine and Atmospheric Research and Dr Ray Wills from WA Sustainable Energy Association.

Minister Wong's opening address outlined the details of the Pacific Climate Change Science Program which will track recent and current trends, investigate climate drivers and provide regional climate projections in a bid to understand the impact of climate change on the entire region.

'The program will be managed by the Department of Climate Change in collaboration with AusAID. It will be delivered by the Bureau of Meteorology and the CSIRO through their

research partnership in the Centre for Australian Weather and Climate Research,' Senator Wong said.

She said the program would help to develop a co-operative research network for countries in the region, international science agencies and Australian universities.

'How we adapt here in Australia to unavoidable changes from...climate change is also an important focus to which science can make a major contribution,' she said.

Federal Government adviser Professor Ross Garnaut, one of the first to address the four-day conference, said nations needed to be careful about using import duties to protect producers against the effects of climate change.

Mr Garnaut told journalists after his address that the US energy secretary spoke favourably about additional import duties on products from countries that weren't doing enough on climate change.

'And that echoes a very strong sentiment from the US Congress. Measures along these lines were tacked to all of the bills that went before the Congress last year,' Professor Garnaut said.

But Professor Garnaut said the Americans and Europeans were also responding to the same issues Australia faced 'the need for free permits to trade-exposed industries to keep them competitive.

'One problem is that if every country goes through its own processes to develop protective mechanisms we'll get...a race to the bottom, a whole lot of protectionist measures proliferating which has a very damaging effect on both the efficiency of the trading system and the efficiency of the environmental policy,' he said.

'The only solution is clear global rules and they would be best developed within the WTO.'

Dr Ray Wills, from the WA Sustainable Energy Association, told the conference this afternoon climate change would impact on all primary industries reliant on the natural environment including agriculture, fishing and forestry.

He warned of the importance to use all means available to reduce and offset emissions, including strong renewable energy and energy efficiency targets.

Perth Jayne Rickard and AAP

Climate fight getting tougher

Garnaut. 29th March 2009, 13:26 WST. The West Australian

<http://www.thewest.com.au/aapstory.aspx?StoryName=561688>

The global financial crisis has made it harder to achieve the needed carbon dioxide reduction targets, says Ross Garnaut, who authored a climate change report commissioned by the federal government.

'I think it makes it harder ... mainly for the political economy factors,' Professor Garnaut told ABC's Inside Business program on Sunday.

'It's made everyone more nervous, business and governments.

'It's focused everyone strongly on the short term and that's understandable, but the long-term problems don't go away just because we're looking at short-term ones.'

The government released draft laws earlier in the month that would introduce an emissions trading scheme in July 2010 and set a greenhouse emissions reduction target between five and 15 per cent for 2020, and 60 per cent by 2050.

However, the opposition, Greens and business groups have voiced concerns about the scheme, which may make it difficult to get through the senate.

Prof Garnaut said it would be in the best interest of businesses to prepare for the introduction of an emissions trading scheme (ETS) so they can maximise profits when it will cost more to pollute.

'But while there's a chance of influencing government, the main effort is going to be put into influencing government, and that's the game at the moment,' Prof Garnaut said.

'We really have to have a strong centre of the policy making process and government decisions being taken in the national interest to get a good outcome.

'We can't realistically expect business to give that to us if the lead's not coming from government.'

AAP