



Clean Energy for Eternity Submission

to the Senate Select Committee on Climate Policy

The Secretary
Senate Select Committee on Climate Policy
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Parliament House CANBERRA ACT 2600
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Bega, 4th April 2009

Dear Members of the Senate Select Committee on Climate Policy,

Thank you for the opportunity to contribute to this crucial national debate on the policies being set in Australia for addressing climate change.

Clean Energy for Eternity (CEFE) is a vibrant not-for-profit community climate change group formed in Bega in 2006. We now have eight active Chapters in Bega, Cooma-Monaro, Eurobodalla, Manly, Mosman, Palerang, Shoalhaven and Snowy River, all working towards the CEFE community target of **50/50 by 2020** (50% reduction of energy consumption and 50% renewable energy by 2020).

The views presented here reflect the general mood of our diverse and widespread membership across six rural Shires and two Sydney suburbs in SE New South Wales. This letter and subsequent brief submission have been cleared through our CEFE Executive, comprising nominated representatives from all eight chapters and current office bearers for the organization (President, Secretary, Treasurer and Public Officer).

Urgent action is required on climate change. There is a great need for bold leadership at all levels of government and from across the wider community and business sector. One central fact echoed by Sir Nicholas Stern, Professor Ross Garnaut and many other serious commentators is that early action on climate change will be far more effective, and less costly than a delayed response (in both economic and ecological terms).

Australia has much to lose from climate change, from the impact of rising sea levels; intensification of floods, fires and droughts; the drying out of the Murray-Darling Basin food bowl, the end of the Great Barrier Reef; potential political instability in SE Asia and a growing likelihood of pressure from climate refugees.

The science tells us that we need to limit atmospheric CO2 to under 450 parts per million, requiring the global population to make aggressive early cuts to greenhouse emissions, followed by tough long term targets in the order of 80% reduction in emissions by 2050.

Key concerns about the Carbon Pollution Reduction Scheme as currently proposed are that not only does it set a cap and a floor on carbon emissions reductions at 5-15%, but that its passage through the Australian Parliament would effectively limit effective action on climate change in this country until well after 2020. Disturbingly, wide distribution of free permits to some of Australia's heaviest greenhouse polluters and reliance on offshore carbon offsets mean that little or significant action to curb domestic emissions at source.

I remind the Senate Select Committee of the warning from Professor Garnaut, who recognised that the impacts of climate change are far worse than most people imagine. His initial report in Feb 2008 was not hindered by politics, presenting facts of climate change science and stating that abatement costs were manageable. He went on to declare that 'a carbon tax would be preferable to a flawed cap and trade system', which is undoubtedly where we now stand.

Allowing CO2 to rise to 550ppm risks the global atmosphere reaching a tipping point that will result in catastrophic and irreversible climate change. A huge gap has opened up between what scientific reality demands, and what the Australian Government proposes.

For the sake of this and subsequent generations, climate change is arguably the single most critical policy area in which we must move swiftly, with an eye to the future.

This submission from CEFE sets out some well reasoned arguments for making real progress to 'Close the Gap' between political rhetoric and planetary requirements.

Please note, CEFE is also signatory to the joint submission from Climate Action Groups.

On behalf of Clean Energy for Eternity members across NSW and beyond,

Yours sincerely,

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Clean Energy for Eternity Response to the Terms of Reference for the Senate Select Committee on Climate Policy (SSCCP)

Herewith are brief responses to each of the Terms of Reference set out for the Senate Select Committee on Climate Policy. (NB. Appendices A, B & C set out our call for an integrated renewable energy policy, a gross national feed-in tariff and scale-up of solar).

SSCCP Terms of Reference

The key issue before Australians today is whether the policy settings currently being locked in actually provide our country, indeed our world, with its best chance of weathering the storm (excuse the pun) of human-induced climate change.

There is little or no argument worldwide that a price on carbon (as a simple but powerful substitute term for the greater complexity of greenhouse gases) is the most effective mechanism for encouraging communities, governments and businesses to take the steps needed to reduce the manmade emissions now threatening our common future.

However, there appears to be no benefit in setting up a critically flawed cap-and-trade emission trading system, such as the proposed Carbon Pollution Reduction Scheme (CPRS), weakened as it is by a multiplicity of free permits and the lax timeframes nominated for real action on achieving meaningful targets.

Specifically, a. the choice of emissions trading as the central policy to reduce Australia's carbon pollution, taking into account the need to

- i. reduce carbon pollution at the lowest economic cost,
- ii. put in place long-term incentives for investment in clean energy and low-emission technology, and
- iii. contribute to a global solution to climate change;

TOR a.i. While there is merit in utilizing an economic instrument to encourage the most cost-effective means of reducing carbon pollution, it is crucial that we grasp the importance of overcoming any dichotomy between economics and the environment. Under the severe climate change scenarios now put forward by international science as not only possible but likely, humanity risks losing a safe stable environment in which to pursue any economic, social or spiritual values.

The opportunity cost of not taking early action far outweighs the estimated economic cost of taking serious steps to curtail emissions now, not after 2020. Australia's emissions are forecast to increase approx. 33% between 2006 and 2020 under a business-as-usual scenario¹. Treasury modeling found that "Australia's aggregate economic costs of moving to address climate change mitigation are small"². The funds required are minimal when compared to the sums currently being distributed to keep a faltering world economy solvent. In addition, any expenditure on developing a true carbon economy will have significant beneficial flow-on effects for the national economy, education, training and employment (see later points under TOR e).

¹ Treasury (Oct 08), "Australia's Low Pollution Future: The Economics of Climate Change", Chart 3.21, p 48.

² Federal Treasury (Oct 2008), "Australia's Low Pollution Future: The Economics of Climate Change", p 137.

TOR a.ii – put in place long-term incentives for investment in clean energy and low-emission technology

Long term incentives and clear market signals are vital if Australia is to seriously promote low emission technologies and support still local clean energy industries (i.e. those not yet offshore seeking venture capital). Funding for Australian R&D into climate mitigation and adaptation should keep pace with the need to achieve practical outcomes.

Commercial investment in this area requires clear government policies that provide certainty for industry and business. Community investment requires innovative partnership approaches that enable individuals, families and communities to leverage their personal savings to greater effect in promoting renewable technologies (see Appendix 2 for comments drawn from the CEFE Community Solar Farm proposal).

TOR a.iii - contribute to a global solution to climate change

To use a well-loved Australian term, it is a complete *Furphy* to claim that Australia makes such a minor contribution to the global problem that we need only be a minor player in finding and implementing the solutions. Our domestic emissions, already one of the highest per capita in the world, pale into insignificance beside the enormity of the emissions created worldwide from our brown coal exports.

Despite our nation's size, Australia frequently contributes above its weight in significant international negotiations and, in the past, has been highly esteemed across the region and on the international stage. Yet, despite the watershed symbolism of signing the Kyoto Protocol in Bali, our track record on climate change action has remained appalling.

Setting weak targets for Australia ahead of the international talks in Copenhagen is unhelpful not only to this country. A myriad of small island and other States in our region are struggling to come to terms with the reality of what unchecked climate change will mean for their populations and their economies in the face of rising sea levels, concerns about food and water security and increasingly energy-hungry enterprises.

There is a real opportunity for Australia to show leadership in the climate arena, building on past good relations and technical cooperation arrangements in place regionally through APEC, ASEAN and internationally through the UNFCCC and other mechanisms. True leadership will require Australia to practice what it preaches - and that will require a significant effort to move away from current dependence on coal and other fossil fuels.

TOR b. - the relative contributions to overall emission reduction targets from complementary measures such as renewable energy feed-in laws, energy efficiency and the protection or development of terrestrial carbon stores such as native forests and soils;

Comprehensive action is required to address climate change on at least four fronts: energy efficiency; adoption of renewable energy; maintenance and improvement of carbon sinks; and just transitions for affected individuals and communities.

If one accepts climate change as a global emergency, then it is reasonable to also accept that it requires urgent action at the individual, the community and the political level. Action in any one of these spheres alone will not be effective in the required timescales.

Similarly, while academically interesting and economically useful to draw up charts of the relative contributions of various components to emission reductions, even more crucial is an understanding of the need for comprehensive action that draws on all available mechanisms and complementary measures.

A graph produced by the US Solar Energy Society in 2006 (Appendix 1) shows relative contributions of energy efficiency and a wide range of renewable energy sources in stabilizing and then reducing US greenhouse gas emissions, without recourse to either clean coal or nuclear energy. It would be valuable to produce a similar chart for Australia and then allocate funding to each sector based on its merits and its need for scale-up support to get up to speed in this country.

Energy Efficiency – Significant inroads into carbon emissions can be made by rapidly expanding existing energy efficiency measures at the domestic, corporate and government level. Efficiency measures targeted through use of established and accredited energy audit procedures, (e.g. the Home Energy Audit (HEAT) teams run by Energy Strategies in Canberra) will achieve better long-term results than scattergun funding for individual elements of efficiency. CEFE supports the creation of the Green Loans Scheme as a step in the right direction. Any retrofitting policies need to be matched by increased stringency in the building code.

Renewable Energy – CEFE believes Australia needs an Integrated Renewable Energy Policy that harnesses the incentives inherent in a gross national Feed-In Tariff (FiT), targeted rebates such as the Solar Credits coming into force in July and an ambitious Mandatory Renewable Energy Target (MRET) (See Appendices A & B).

Evidence overseas shows that a gross national FiT is an equitable and highly effective mechanism for providing start-up support for the development of the renewable energy sector. It can be tailored to assist various energy sectors at a differential rate over time, so that once an industry takes off and volume of sales increases beyond a certain point, the tariff can be redeployed to encourage another sector – eg a FiT initially for the solar industry could be directed to the geothermal industry once solar power reaches parity with conventional electricity around 2016.

Terrestrial Carbon Stores – unfortunately international scientific evidence points to a decline in the ability of global carbon sinks to capture and store carbon dioxide and other greenhouse emissions³. This increases the urgency with which Australia needs to take action to protect and further improve existing carbon stores.

The single simplest and most powerful action that Australia could take to improve the national carbon balance would be to stop logging of native forests for woodchip exports, a wasteful enterprise that currently converts huge stores of carbon⁴ into ephemeral paper products overseas that rapidly decay and emit all their stored carbon equivalents.

³ Canadell, JG. and Raupach, MR (2008) Perspective: Managing Forests for Climate Change Mitigation. *Science* 13 June 2008: Vol. 320. no. 5882, pp. 1456 - 1457

⁴ Mackey *et al.* (2008) Green Carbon: The role of natural forests in carbon storage. ANU Fenner School.

TOR c. - whether the Government's Carbon Pollution Reduction Scheme is environmentally effective, in particular with regard to the adequacy or otherwise of the Government's 2020 and 2050 greenhouse gas emission reduction targets in avoiding dangerous climate change;

CEFE feels strongly that the CPRS emission reduction targets for 2020 and 2050 are grossly inadequate and set Australia on a dangerous path to escalating climate change. Given that current climate science calls for reductions of at least 40 %-50% by developed countries by 2020, CEFE strongly opposes the 5%-15% target and notes with concern its potential to undermine the resolve of regional nations ahead of talks in Copenhagen.

From an ecological perspective, the CPRS also reveals shallow thinking about the need to maintain the resilience of ecosystems and buffer local economies. A bolder approach to reducing carbon emissions would set a firm market signal for companies investing in low emission technologies and lead to spin-off benefits in surrounding communities.

Environmental effectiveness requires robust early action on climate change. By contrast, the proposed CPRS appears deeply flawed both in scope (ie. its exemptions for emissions intensive trade-exposed industries (EITE) and its delay in protecting/enhancing carbon sinks (ie. through incentives for improved management in agriculture and forestry).

Once established on a slow trajectory with its 2020 target, Australia will be hard pressed to reach its more ambitious 2050 target⁵, particularly if any ecological thresholds crossed in the interim make recovery even more difficult.

TOR d. - an appropriate mechanism for determining what a fair and equitable contribution to the global emission reduction effort would be;

The first element of an appropriate mechanism must be a firm commitment by all nations to take climate change seriously and produce their own comprehensive national plans to address domestic greenhouse emissions. Equity requires the mechanism to address the historic carbon debt created by developed countries whose economic wealth is largely founded on long-term fossil fuel consumption. This obligation for developed nations to act 'first and fastest' was acknowledged in Bali, but slowed in Poznan with a deadlock when countries like Australia refused to set firm targets⁶.

Proposed CPRS legislation allows firms to purchase an unlimited amount of international permits to meet their emissions reduction obligations in Australia. Treasury modeling assumes that international permits will make up the difference between actual emissions and the CPRS emissions allocation (this means that Australia can still technically claim to meet its official 5% cap even though actual domestic emissions are forecast to increase to 585.1Mt in 2020 (higher than the 553Mt in the year 2000).

CEFE therefore states that the current CPRS does not constitute a valid Australian contribution to a fair and equitable global mechanism to global emission reduction.

⁵ International Scientific Congress on Climate Change (March 2009), "Congress Key Findings – Final Press Release", http://climatecongress.ku.dk/newsroom/congress_key_messages/.

⁶ Keough (2009) 'Stop harming, start helping'. Article in Oxfam News Autumn 2009, p.15

TOR e. - whether the design of the proposed scheme will send appropriate investment signals for green collar jobs, research and development, and the manufacturing and service industries, taking into account permit allocation, leakage, compensation mechanisms and additionality issues; and

With due recognition of some very good partial initiatives (such as the home-owners retrofit scheme), the Australian policy settings on climate change currently proposed by the Federal Government are sending piecemeal and contradictory messages to industry and the community alike. The focus has been squarely on the development of a (now seriously flawed) emission trading scheme, with the overly optimistic perspective that this will instantly provide a silver bullet that will address climate change.

One of the basic dilemmas in paying for action on climate change is how to ascertain whether the project or activity can 'demonstrate that it generates permanent, verifiable emission reductions which are additional to, or beyond, business-as-usual (BAU)'.⁷ 'Additionality' is the term used for that requirement under both the Federal government's own Greenhouse Friendly definition and the IPCC Cleaner Development Mechanism. Giving credit to BAU emission reductions will not help accomplish the policy goal of facilitating investment in new projects that would not otherwise have happened.

Green jobs are a real potential side benefit of tackling climate change head-on. CEFE strongly supports the call for a national effort to identify and stimulate the green skills, knowledge and work needed for a low carbon economy, funded by a proportion of revenue from Australia's proposed emissions trading scheme⁸.

According to the UN Food and Agricultural Organization, 10 million new "green jobs" can be created by national investments in sustainable forest management, including agro-forestry and farm forestry, improved fire management, development and management of trails and recreation sites, expansion of urban green spaces, restoring degraded forests and planting new ones⁹. Forests are vital stores of carbon, so such investment could make a major contribution to climate change mitigation and adaptation¹⁰ and support Just Transitions in Australian forest industries away from current woodchipping activities.

TOR f. - any related matter.

Our nation needs to show leadership in tackling climate change. We need to be encouraging other countries into action, rather than waiting for them to act. We need a tough emissions trading scheme, we need a strong Mandatory Renewable Energy Target, and we need a gross national feed in tariff up and running by 2010. We want strong short and long term targets. We need urgent meaningful action to curb greenhouse emissions. We believe that an aggressive pro-active response to climate change will lead to a more resilient society and generate millions of dollars and hundreds of jobs for our regional economy. Why would we not act now? There is a lot to lose.

⁷ *Greenhouse Friendly™ Additionality Factsheet* Department of the Environment and Water Resources, Version 1.1. Released 08.08.2007

⁸ ACF and the Dusseldorp Skills Forum (2009) Climate change action to create 3m green collar jobs (See http://www.acfonline.org.au/uploads/res/GreenCollar_ExecS_web.pdf)

⁹ UN FAO (2009) <http://www.fao.org/news/story/en/item/10442/icode/>

¹⁰ Eg Blakers (2008) Forests vital for climate protection Green Institute www.greeninstitute.com.au,

Appendix A.

CEFE Proposal for an Integrated Renewable Energy Plan

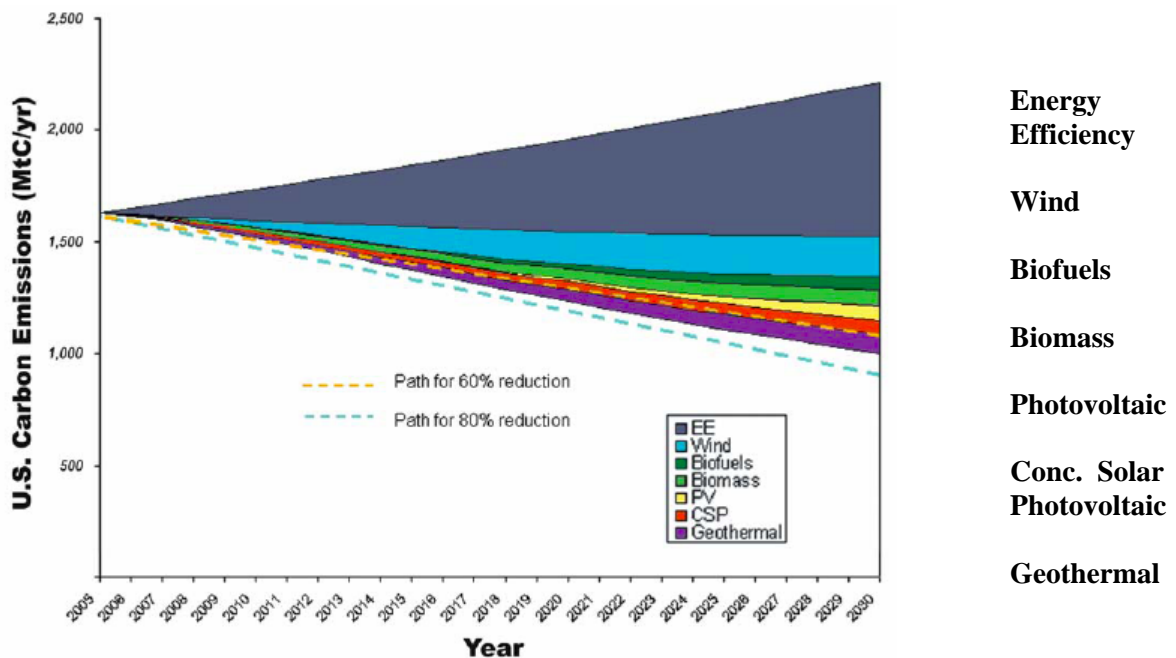
Purpose

To outline a sensible and pro-active plan that can assist the Federal Government to increase the renewable mix in Australia's energy portfolio by 2020.

Rationale

Australia's contribution to creating a safe climate must include a national transition to greater use of available renewable energy options, including solar, wind, wave, geothermal and sustainable biomass¹¹. Clean Energy for Eternity (CEFE) believes strongly that the rapid development and deployment of the full range of technologies in Australia requires a national integrated renewable energy plan. Our experience in getting local initiatives to address climate change off the ground in SE NSW has revealed the critical importance of strategic long-term policies at all levels of government to facilitate rather than to stymie practical community action.

Graph 1 below shows a combination of energy efficiency gains and deployment of various renewable energy sectors reducing US Carbon Emissions, without recourse to either nuclear power or clean coal technologies. The key rationale for an integrated renewable energy policy would be to bring this full range of renewable technologies up to scale in Australia.



Graph 1. Potential of Renewable Energy and Efficiency Gains to Reduce US Carbon Emissions. **Source:** US Solar Energy Association (2006)¹²

¹¹ 'Sustainable biomass' does not include the use of native forest woodchip waste or palm oil or sugar cane grown specifically for biofuels (domestically and internationally).

¹² US Solar Energy Society (2006)

Key Elements of CEFE Integrated Renewable Energy Plan

CEFE sees the value of interconnecting and mutually supportive policy settings for renewable energy rather than reliance on a single economic tool, such as the planned emissions trading scheme or CPRS, which will take several years to come into effect.

Mandatory Renewable Energy Target

Australia needs ambitious national targets to inspire the community to rapidly adopt renewable energy resources. CEFE therefore strongly supports the expansion of the Australian MRET to 20% by 2020¹³. Achieving this target will require the use of a range of policy tools, as set out below, to give renewable industries confidence despite current global economic circumstances and enable them to expand their businesses with security.

The MRET scheme has, thus far, primarily benefited the wind industry as the most cost effective renewable technology off the shelf at this stage. Other complementary schemes are needed to assist other important technologies to reach critical mass in Australia (e.g. see Appendix C).

Rebates

Rebates have an important transitional role in supporting renewable energy uptake. However, CEFE notes that all current and planned Federal rebates associated with renewable energy, including the solar credits, have all focussed on renewable energy installations at the domestic scale. Yet developing the infrastructure for the generation of 1 kW of energy via a macro solar power station is considerably more cost-effective than single 1 kW household systems due to the economies of scale (in the order of \$4,000 to \$8,000 per kW). There would be significant economic and environmental advantages in supporting the development of macro renewable generation systems. Changes suggested below also would make the Federal rebate scheme more equitable to the community

National Gross Feed-In Tariff

Feed-in Tariffs (FiT) are being used in more than 40 states and jurisdictions around the world to promote the uptake of renewable electrical energy. The most ambitious model, and by far the most successful, has been in Germany, but Canada and Spain are other good examples.

One chief merit of a FiT is that it spreads the cost of the renewable energy incentive across all electricity users, rather than requiring governments to pay out grants or rebates from internal revenue. A second important point is that experience shows that, over time, the need for the market incentive diminishes as the renewable industry in question takes off under its own steam. In Germany the FiT has recently been reduced for solar photovoltaics as the industry reaches maturity and achieves economies of scale.

CEFE strongly calls on the Federal Government to implement a gross national feed-in tariff for renewable energy generation in Australia.

¹³ However, we call on government to expand the representation of the high level consultative committee on the Energy White Paper to include national experts on renewable energy.

Appendix B

Call for National Gross FiT to Support Community Power

Community power taps into resources not otherwise available, lowers the cost of capital, creates local employment and helps the community to engage with the need for energy efficiency and renewable energy production. Experience in Ontario, Canada, where the Feed-in Tariff (FiT) applies to community (but not commercial) farms as well as roof-tops, provides the evidence to demonstrate the valuable complementary role community power can play. There is now a strong community power sector in Ontario.

A key CEFE project in 2009 is developing a replicable model for a community solar farm in Bega through an urban-rural collaboration between the communities/CEFE chapters of Mosman and Bega. The study is funded by a \$100,000 Green Precincts grant, with every indication that DEHWA will make a further \$1 million available for initial construction if the feasibility study submitted at the end of March 09 demonstrates viability.

The timing of this feasibility study has led the project team to grapple with multiple uncertainties, with major policies due to be announced at State and Federal level. The eligibility criteria chosen for State and Federal FiTs will have a crucial impact on whether or not a community based renewable power generation sector develops in Australia.

We urge you to develop a national FiT that includes community power stations up to 10 MW. This would open up to all consumers the possibility of investing in renewable energy. A scheme restricted to domestic rooftops is inequitable in that all members of the community are then being asked to fund a benefit that only some can access. Renters, owners of apartments, and owners of houses with unsuitable roof space would all be able to access the FiT if it applied to solar farms in which they could invest.

We believe that this extension of FiT schemes operating in SA and Qld would have enthusiastic political support across the entire community. It would create more jobs, give greater stimulus to the PV industry and drive down emissions faster than a constrained scheme. Finally it would open up opportunities for serious community/government partnerships and encourage regional self reliance on renewable energy.

With appropriate policy settings at the Federal and State and local Government level, community owned solar farms can be built in many locations, many times.

Appendix C.

PROPOSAL FOR BRINGING SOLAR UP TO SCALE IN AUSTRALIA

The great economic advantage of solar (and wind) power is that the energy is free and abundant, and the cost of the power does not change over the life of the power plant.

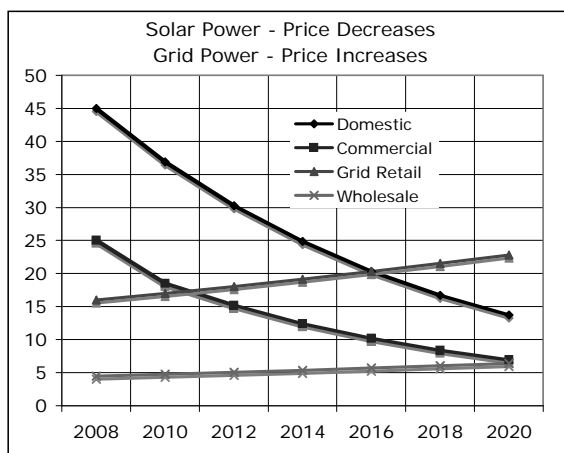
If solar is to be part of the mix of energy sources in Australia, its initial uptake will need to be strongly supported and promoted by governments. Once established however, there is every indication (eg from Germany and Canada) that the industry will take off of its own accord and require little further assistance. Recent reports have solar power reaching parity with conventional power within 5-10 years, much sooner than expected.

CEFE is keen to ensure that solar photovoltaics (PV) and solar thermal technologies play their role in contributing to Australia's future energy mix. Our analysis suggests it is vital to support the early development of solar power through a mixture of adequate feed-in tariffs and solar rebates to achieve a 50% growth in the solar industry per year.

Solar Power Price Decreases

The price of electricity produced by PV electricity is projected to continue to fall at a rate of 18% for each doubling of global installed capacity as a result of technological advances and economies of scale. Graph 2 shows price decreases for both small domestic, and larger commercial, PV installations, compared with the present wholesale and household retail price of electricity - both increasing at an annual rate of 3%.

Projected retail price parity occurs by about 2011 and 2016: by about 2020 commercial solar power will be cheaper than power from coal power plants. These projections are based on the assumption that growth in PV will occur at just over 40% a year, with each doubling at 2 yearly intervals (a conservative estimate based on present trends).



Graph 2

There has been a temporary world shortage of highly purified silicon because of the rapid growth of the solar industry. Silicon will soon be plentiful as there are more than a dozen new plants about to come on-line. The cost of PV cells is projected to fall dramatically – one prediction is for a 40% fall from 2007 prices by 2010 – but this is unlikely to be fully passed on to consumers as the demand for solar panels is exceeding production, and the cost of solar cells is only about 50% of the final installed price of solar power.