

MAKE WOLLONGONG AN AUSTRALIAN ECO-CITY

The Wollongong City Council currently seeks feedback on the Blue Mile Vision and Masterplan 'to maximise Wollongong's advantages as a city by the sea'. The planning objectives do not address environment protection or ecological sustainability and the Council's Environment Fund website does not discuss air quality or climate change. In the light of current regional and national interests discussed later, this is short-sighted. A better coordinated range of projects is recommended for continuing community development, research and related joint venture funding, in the light of the emissions abatement incentives now being offered by Australian government prior to commencement of the Australian Emissions Trading Scheme, planned to commence in 2011. The Climate Change Group of the Department of Prime Minister and Cabinet is offering the emissions abatement incentives. It is also assisting discussion and implementing of the National Greenhouse and Energy Reporting Bill (2007). The primary aim of the incentives is to gain greater sustainability in production through offering support for effective reduction of greenhouse gas emissions, as well as their measurement and verification. A related aim is to encourage carbon neutrality through trading and investment which assists reduction of harm to environments. Wollongong is ready for broadly agreed development and research projects. Now is the chance for Wollongong to lead ecologically sustainable development in Australia. All relevant NSW and Commonwealth funding for environment protection should be considered in this coordinated, regional planning context for better competitive outcomes.

This is the first draft of a living document for general consideration in relation to sustainable project development and joint venture funding, prepared by Carol O'Donnell with the assistance of Frank Coluccio of Hi-Tech Consulting in Wollongong. O'Donnell was formerly a policy adviser working in NSW government, who then spent 11 years as a lecturer at Sydney University before retiring in March 2007.

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1. CLIMATE CHANGE IN INTERNATIONAL AND AUSTRALIAN CONTEXT

The United Nations (UN) Declaration on Environment and the Australian direction

The first principle of the UN Declaration on Environment adopted in Rio in 1992 is that human beings are at the centre of concern for sustainable development and are entitled to a healthy and productive life in harmony with nature. Australia signed the Declaration. At the 1994 Asia Pacific Economic Cooperation (APEC) summit, national leaders then agreed to create an Asia-Pacific free trade zone by 2020, and supported protection of health, the natural environment and more transparency. In 2001 the Minister for the Environment and Heritage launched the Australia State of the Environment Report which concluded that Australia is far from achieving sustainability and major problems remain. The report identified a range of challenges related to degradation of land and water and to loss of biodiversity and national heritage. In 2002, the Wentworth Group of Concerned Scientists, convened by the World Wide Fund (WWF) Australia, following this general direction in its 'Blueprint for a Living Continent'. There were other relevant initiatives.

Global warming and calls for global emissions measurement and reduction

Australian community debate and related regulatory concern have recently been mounting in regard to the causes, effects and measurement of global warming on air, water, land and biodiversity. Scientific inquiry has strongly suggested that global warming and its effects on life are caused primarily by noxious emissions being put into the atmosphere as a by-product of current production and consumption systems. In 1992 the UN Framework Convention on Climate Change (the Kyoto Protocol) called upon governments to reduce emissions through the combination of regulated emissions reduction targets and related, open market, trading systems. The Protocol was ratified by 55 countries, but not by the US or Australia. It primarily discusses the relationship of countries to each other in managing emissions downwards and reporting on the results. It does not explain how a market system is best established to assist the process effectively. Australia is now also discussing related emissions measurement and verification issues.

In 2006, WWF Australia suggested many activities to reduce Australian greenhouse gas emissions by a third by 2030 in a document entitled 'A Prosperous Low Carbon Future'. In 2006 Macquarie University organized a talk entitled 'Removing Market Distortions to Promote Sustainable Development' by the former OECD economist, Philippe Barde. He stated that, from his European perspective, the only sensible use of government funding to support sustainable development was:

- Funding to promote more environmentally friendly production
- Funding to assist people out of polluting industries

Such protective activities by government have a long history. A major question now is how government expectations may best be married to the traditional trading systems in order to reduce global emissions better, through the market players' money-making goal.

Recent Australian initiatives to reduce emissions through their regulation and measurement, supported by related trading and research

In July 2007, the Commonwealth Government released 'Australia's Climate Change Policy: Our economy, our environment, our future'. This endorsed the need for an emissions trading scheme, as set out in the report of the Prime Ministerial Task Force on Emissions Trading. The Government indicated that it is aiming for the emissions trading scheme to commence in 2011 and that it is committed to ensuring that incentives for abatement are maintained in the period leading up to the scheme commencement. The Government is also committed to consulting extensively on the design of the emissions trading scheme over the coming year. The establishment of a market that works effectively to reduce emissions is not easy to design, as the Total Environment Centre and others have made clear in the references outlined at the end of this submission.

The Climate Change Group of the Dept. of Prime Minister and Cabinet is currently assisting discussion on the National Greenhouse and Energy Reporting Bill (2007). This lays the foundation for the Australian Emissions Trading System to commence in 2011 by requiring major emitters of greenhouse gases to measure and report to government on their emissions, prior to reducing them, as required by law. In the meantime, however, there are opportunities for voluntary involvement in existing emissions trading markets which allow people to invest in technologies and related practices which may also reduce greenhouse gases. In the mature, government supported market of the future, it is assumed that polluters will first measure their greenhouse gas emissions and report to government on their level. Government will then issue the polluter with a number of permits, representing their level of emissions above the baseline of government allowed emissions. The government will reduce the level of allowable emissions over time and the relevant organization is also expected to reduce its emissions accordingly. This is ideally done by reducing its emissions at source, or by 'offsetting' its emissions through investing in technologies which reduce greenhouse gases emitted by others, elsewhere.

There are currently many uncertainties about how organisations ideally should measure their emissions and how the report of their level of emissions to government should be checked. This in turn leads to uncertainties about how the government provision of 'permits to pollute', would lead to an organization investing them in the market in a way which effectively brings about genuine emissions reduction in areas of production other than their own establishment. Such problems are discussed in the Total Environment Centre books entitled 'Neutral and Beyond: A Review of Carbon Neutrality and Offsets' (2007) and 'Carbon Neutral Watch – Corporates, Consultants and Credibility' (2007).

The word 'carbon neutral' is sometimes used to describe a company that has supposedly reduced its emissions to zero, either by improving its own energy efficiency and buying green power, but also by purchasing 'offsets' to compensate for its remaining emissions. As the Total Environment Centre points out, the challenge in Australia for companies, analysts, and shareholders is to ensure that there is a common understanding of what it means to be 'carbon neutral' and also to gain agreed standards for each of the elements involved in achieving that status. However, the fact that effective measurement is often difficult should not stop us trying to learn more and act sensibly. Otherwise environmental problems will only get worse. (We cannot measure love, neglect or hatred either, but we broadly understand the effects of the latter and try to reduce them.)

Developing risk management perspective to protect communities and environments

In this context, continuing experiment and all related research is vital. The Climate Change Group in the Department of Prime Minister and Cabinet has produced a paper recently, entitled 'Abatement incentives prior to the commencement of the Australian Emissions Trading Scheme' (2007). The Total Environment Centre recommended that organizations first try to reduce their total emissions at their sources, through elimination or substitution methods, and by using related engineering or other technological and administration strategies. If this is not fully possible, the purchase of 'offsets', which are aimed at reducing environmental problems in other areas of living is recommended.

The Total Environment Centre and the Government Climate Change Group appear to be taking a coordinated risk management perspective, of the kind which was first introduced as a requirement for employers and workers during the 1980s, when state occupational health and safety (OHS) acts were passed. Australian businesses were thereby encouraged to think about assessing and prioritizing organizational hazards and establishing related risk controls, to protect workers, communities and environments. A related international risk management approach appeared to be taken by representatives of the Munich Re Group, at a recent sustainability research event at Sydney University. More broadly coordinated risk management perspectives have been described in an article by O'Donnell entitled 'A healthier approach to justice and environment development in Australian communities and beyond', in *Public Administration Today*, (Oct.-Dec.2006), the journal of the Institute of Public Administration of Australia (IPAA). 'From the Constitutional past to the new educational ideal', is in a later issue.

Communities as well as organizations may take a risk management perspective, which aims at promoting healthy environments by identifying and prioritizing the risks of production and consumption systems, before trying to reduce them. Early opportunities for development, related research and education are now afforded by the Department of Prime Minister and Cabinet through their introduction of emission abatement incentives prior to introduction of the Australian Emissions Trading Scheme. It is later argued that Wollongong presents itself as a working community which is ideal for developing and testing all the concepts necessary for becoming an ideal Eco-City. In the above context, this may also be primarily defined in terms of the passage towards carbon neutrality.

Key requirements of the National Greenhouse and Energy Reporting Bill (2007)

The National Greenhouse and Energy Reporting bill mainly requires measurement and report of an organization's noxious emissions, to reduce them. This is the necessary precursor to development of a more effective emissions trading scheme. It seems reasonable to take a coordinated organizational approach to measuring other pollution, in order to reduce it, as well as to other measures necessary to reduce risk to biodiversity.

The National Greenhouse and Energy Reporting bill is currently generating much community debate, as noted in the report of the Senate Environment, Communications,

Information Technology and Arts Committee (2007). However, most Australian communities now appear to realize the importance of hastening sustainable development activity. This action can also assist development of the most effective legislative direction. Accordingly, the paper on 'Abatement incentives prior to the commencement of the Australian Emissions Trading Scheme', produced by the Climate Change Group of the Department of Prime Minister and Cabinet, proposes development of streamlined protocols for early action and 'offset projects' aimed at reducing the causes and effects of global warming. Stakeholder feedback is also sought on priority project activities for protocol development. This submission has been developed in response to that request.

Requirements of the Emissions Abatement Incentives Program

Under the Emissions Abatement Incentives Program, the Commonwealth government will provide an up front free allocation of permits (early action credits) to firms suffering a significantly larger than average loss of asset value as a result of the introduction of an aggregate constraint on Australia's emissions. Government proposes that such credits are only provided for activities that represent abatement that has actually occurred, and which are additional to normal production methods, as well as being permanent, measurable, and verifiable. Action credits may be accompanied by the government provision of offset credits if abatement activities are in sectors not covered by the scheme (e.g. agriculture or forestry emissions).

All suitable projects established after 3rd June 07 are eligible to apply for early action and/or offset credits. It is also proposed that the Australian Government's Greenhouse Friendly program will provide the initial administrative mechanism for approving early action credits and offset credits for use in an emissions trading scheme. The Government does not propose any quantitative limits on early action credits.

As Gavin Brown, Vice Chancellor of Sydney University has noted, co-investment is the key to future development (Sydney Morning Herald 24.9.07, p.15). Rick Turchini, the Managing Director of Baulderstone Hornibrook, said on the same day:

'Creating alliances is another way forward, as teams from the public and private sector come together, develop shared objectives and work towards a common goal. This can reduce conflict, as well as developing a way of sharing risk appropriately.' (Australian Financial Review, 24.9.07, p.71)

This is the approach we also support through project proposals in this submission. It is also likely to be supported by government and Lend Lease, as discussed later.

Greenhouse reporting and relevant recommendations about NSW electricity supply

It is estimated that around 35% of Australia's total green house gas emissions are produced in the generation of electricity that is consumed by various end users (WWF 2006). According to the report of the Inquiry into Electricity Supply in NSW (Owen Report, 2007) the national electricity market (NEM) was established in 1998 to provide a more broadly competitive market for the supply of electricity to most Australian states. In comparison with other states in the NEM, private sector investment in the electricity sector in NSW is minimal. The effects of a range of NSW Government measures for mitigating environmental degradation and climate change appear to have produced enhanced levels of energy efficiency in the state. For the next decade, growth in electricity requirement is projected to average 1.8% per annum, compared with 2.5% over the past decade (Owen, 2007).

The NSW Greenhouse Gas Reduction Scheme was a forerunner of the proposed national emissions trading scheme and one of the first mandatory emissions trading schemes in the world. The Owen report states this has been a major factor encouraging combined cycle gas turbine (CCGT) plants and other less polluting energy sources into production. Owen stresses the future uncertainty surrounding the electricity industry because of the need to achieve the governments' energy and climate change policy objectives, and sees this as an opportunity for progressive change. He recommends that government privatize the currently separated electricity generation and retail businesses, thus allowing companies to own both aspects of the energy production and distribution process, which would allow them to adopt most cost-efficient outcomes. He encourages the government to maximize the range of competing potential investors, quarantine risk and bring forward the timetable for establishing a national emissions trading scheme. All this does not mean selling the grid, which are the 'poles and wires' of the state's transmission and distribution networks. Owen argues that this privatization process also provides a vital opportunity to support many new and cleaner energy sources, based primarily on cleaner coal or gas production but also on non-renewable energy generation sources such as wind and biomass. The Premier has ruled out nuclear technologies in NSW (Owen, 2007).

National opportunities to pioneer sustainable development in housing

The National Affordable Housing Summit recently noted that housing is becoming increasingly unaffordable and decided that the Commonwealth should allocate at least \$200 million per annum towards to the development of a national Capital Grants program and Affordable Rental Incentive Scheme, rising to a total of at least \$500 million per annum in the fifth year. Commonwealth funding is available for a Residential Infrastructure Fund to support the building program with \$250 million available in the first year, to grow to \$500 per annum by the fifth year (www.housingsummit.org.au). It is currently estimated that Australian households account for around 20% of Australia's greenhouse gas emission (WWF 2006, p.11). The proposals of the National Affordable Housing Summit present an opportunity to ensure that consideration is given during planning and construction to reduction at the source of household emissions related to transport (31%); refrigerators/other appliances (25%); space heating, water heating, standby power, lighting and waste, which make up the household emissions burden.

David Hutton, the CEO of Lend Lease Retail and Communities APAC, wrote to the Treasurer (28.9.07) stating that his organization believes that affordable housing and sustainable communities can be best delivered in large scale projects and that this will result in the most integrated outcomes and most efficient use of any government subsidy. (He noted that Lend Lease is the major supplier in the privatization of US military housing, controlling 44,000 homes across the US.) Lend Lease calls for clear identification of broadly expected project outcomes and a related clearer identification of major project risks and accountabilities. At a recent Shelter Conference, NSW politician, Ms Angela D'Amore, indicated that government ministers or the Premier will now accept and deliberate upon serious housing proposals from any quarter at any time. This presents an excellent opportunity for related housing and sustainable development plans in Wollongong or elsewhere. We may now look forward to Shelter's conference entitled 'Climate Change: How Will It Involve Low-income Households?' on 15/11/06.

Opportunities for government, industry superannuation fund and other investment

It seems clear that government, industry superannuation funds and others should now consider investing in Australian housing and sustainable development, if only to avoid the major risks which may go with investing in international markets which are often opaque, and driven by a comparative few who have more power and knowledge to assist pursuit of their own interests, than most Australians can ever have. I recommend the Shelter website discussion by Robert Mobray and Nicholas Warren entitled 'Shared Equity Home Ownership: Welfare and Consumer Protection Issues' (2007).

In regard to discussion of trading and investment it should be understood that pursuit of sustainable development normally requires a more open paradigm compared with that normally applied in markets. The general desirability of the individual pursuit of economic self-interest is the paramount assumption of the market paradigm, enshrined in common law principles which guarantee client legal privilege, and in legislation such as the Trade Practices Act. The key assumption is that the secretive pursuit of economic self-interest is also in the common interest. But this often increases the risks and costs borne by all beyond a protected circle of financial managers, business lawyers, their families and friends. The disgruntled must normally take barristers to court. The truth is of secondary interest in this legal framework. The court knows no risk, only expensive expansion, driven by regulation paid for by the public. In a global economy ruled by common law and legal privilege, such feudal dysfunction seems likely to get more costly.

In this investment context it is also worth remembering the recent failures of the US 'sub-prime' mortgage markets and the impact on 'low-doc' loans in Australia, as well as what happened to HIH and Enron. Enron had roles as an energy trading entity and roles as an energy producer and distributor in partnerships with industry and governments. It was supported by banks, pension funds and many others in charge of investing other peoples' money. Enron did everything it could to give an increasing appearance of profitability, to encourage investment in its total activities. However, it took comparatively little or no interest in the actual quality of its energy production and distribution activities because to do so would have harmed its further trading activities, paper profits and share price.

Enron did many deals and those doing them became incredibly rich. The people consuming energy and investing in Enron were massive losers when many promised deliveries were not made, and the company crashed. Don't let that happen here.

2. WHY A SUSTAINABLE DEVELOPMENT EMPHASIS ON WOLLONGONG?

A major survey undertaken by the Department of Environment and Conservation NSW (2006) indicated that people contacted thought the two most important environmental issues in NSW today are water supply/conservation management/drought and air pollution/air quality. The third area of major concern was forest/bushland/biodiversity issues. According to the survey, 96% of people in NSW believe that the aim of environmental regulation should be to improve rather than merely maintain the health of the environment and 68% disagree with the proposition that environmental regulation is restricting or holding back the NSW economy. Wollongong is considered in a broadly supportive NSW context, where change to improve the environment also appears vital for improving Australian business competitiveness nationally and internationally.

Wollongong's major employers are major greenhouse gas emitters

Major employers located in Wollongong emit a large amount of greenhouse gas and so will be affected by the new legislation on emissions measurement prior to trading. The WWF's proposal to reduce Australian greenhouse gas emissions by a third by 2030 states that Australia's primary metals industries are large and energy intensive with only a few dozen facilities being responsible for 15% of Australia's greenhouse gas emissions. Australia's other industries, including mining and manufacturing are responsible for around 25% of national greenhouse gas emissions (WWF, 2006). This suggests that some of Wollongong's largest employers, such as BHP Billiton and Bluescope Steel, will be strongly affected by the requirements of future legislation related to the measurement and control of emissions. This proposal, which is put under the Early Abatement Incentives program, is therefore also addressed to them and others in related positions.

The report of the Australian House of Representatives Standing Committee on Economics, Finance and Public Administration entitled 'Australian Manufacturing: Today and Tomorrow' (July 07) was commissioned by the Treasurer. It states that in May 2007 the Prime Minister promised \$351.8 million over the next ten years to establish Australian Industry Productivity Centres to provide 'a range of general and specialist services'. They will 'provide a free diagnostic service to help businesses assess their performance against world best practice and identify opportunities for improvement' (2007, p.205). Bluescope Steel's submission to this manufacturing inquiry pointed out that one of its key priorities is 'ensuring greenhouse gas regulations do not make Australia's steel industry uncompetitive' (p.2). Bluescope noted that China is the world's largest producer and consumer of steel and therefore a major polluter, as well as Australia's leading trade partner. In this context, the National Greenhouse and Energy Reporting Bill may be regarded as a threat or an opportunity. We regard it as the latter, if only because the sustainable development direction is globally unavoidable and countries that do not see this will be left behind or universally blamed.

The Illawarra has many mutually supportive stakeholders in manufacturing

The Illawarra Mercury (25.4.07, p.9) reported that stakeholders in the Illawarra's manufacturing sector, including representatives of business groups, manufacturing firms, union officials and politicians came together recently to explore their common ground, especially in relation to infrastructure needs and skills development, in order to put a united front to government to secure employment and development for the region's future. Senator Kim Carr and Australian Council of Trade Unions (ACTU) President, Sharan Burrow, are reported as addressing the meeting and arguing that 'sunrise industries', such as solar, thermal and geothermal energy, should co-exist with those that have sustained the Illawarra for generations. They argued traditional industries could be redefined by cutting edge technologies developed in the region and exported nationally and that jobs would also be created through the perfect symmetry between business, university and the other stakeholders in the region. As Kim Carr pointed out, 'This isn't about people doing the jobs their fathers did and nothing ever changing'. But as Sharan Burrow said, 'There's no question that jobs can be created here as part of the response to climate change'. These two things must go together, with appropriate learning for all.

One hopes that BHP Billiton, Bluescope Steel and other large employers will take the opportunities now offered through the emissions abatement scheme to work with interested communities in Wollongong and the Illawarra generally. The Prime Minister recognised the importance of emissions reduction when key business leaders were invited to join the Task Force on Emissions Trading. The Group includes Chris Lynch, the Executive Director of BHP Billiton. Perhaps he or his nominee might act as a Business Angel to suitable projects. The ACTU submission to the inquiry into manufacturing stressed the importance of Australian industry progressing 'up the value chain'. The National Greenhouse and Energy Reporting Bill and the early Abatement Incentives Program may be constructed as vehicles. Support is proposed for the project directions below, for continuing development with stakeholders.

Illawarra Community and Wollongong Council support sustainable development

Wollongong and its surrounding communities have a major interest in planning for sustainable development. This has been demonstrated in many initiatives which have begun previously, and which are discussed later in this submission. The level of interest was most graphically demonstrated by a photo in the Mercury News (22.5.06, p.7) which shows more than 2000 Far South Coast residents making their feelings on climate change abundantly clear by making themselves into a human banner on the sands of Tathra Beach to spell the words 'Imagine Clean Energy for Eternity'. The organiser of the event was Bega orthopaedic surgeon Mathew Nott, supported by citizens from all parts of the Bega Valley Shire. The Clean Energy Action Plan for Bega Valley Shire is vital reading.

The Wollongong Climate Action Network is a related community group which currently meets on a monthly basis. It aims to exert political influence on all levels of government to take action on climate change and to encourage others to do so individually and

collectively. The Network also seeks to put climate change on business and other community group agendas. Most recently it organized Cool Day Out at Smiths Hill High School, with the support of I98 FM radio, Wollongong City Council, Bunnings Warehouse, the Department of Environment and Water Resources and the Australian Greenhouse Office. Solar power, recycling, gardening, water tanks, gas conversion, energy efficiency, electric bicycles, architectural advice, ethical investment and test driving hybrid cars were all on the agenda during this very successful day.

Many Wollongong residents and businesses, like Frank Coluccio and Fady Sidrak of Hi-Tech Consulting, have advocated for years for Wollongong to become Australia's first Eco-City. In a recent interview with the Illawarra Mercury (8.12.06) Coluccio pointed out the potential for links between Wollongong and the Chinese city of Dongtan, which plans to become an Eco-City, with environmentally friendly transport and many other features. If Wollongong followed China's lead and generated more eco-friendly industries it would become a model for more cities to follow. Related plans proposed by Hi-Tech Consulting and the Climate Action Network need to be addressed, along with potential research and education support through the Wollongong Innovation Campus and the new Technical and Further Education (TAFE) Graduate Certificate in Ecologically Sustainable Development. This was developed for the Manufacturing and Engineering Process Industries in Wollongong, but has not yet been introduced.

In 2002 a broad strategic planning initiative entitled Wollongong Futures was undertaken for the City of Wollongong, along with a review of the city's statutory planning tool, the Local Environment Plan. The goal of Wollongong Futures was to establish a vision based on the principles of sustainability and inclusiveness to take Wollongong into the future. The community values survey conducted for the planning exercise by IRIS Research showed that environmental protection and control was rated as the highest community priority of the twelve listed categories of community interest. The most common responses were:

‘The need to clean up beaches, creeks and waterways; improve Lake Illawarra, protect escarpment, natural environment, reduce pollution and improve waste management.’

(Main priority areas for resource allocation. Summary of Main Responses Wollongong Futures Community Values Survey, IRIS Research, June 02, p. 36)

The Regional Economic Overview prepared by Leyshon Consulting for the Wollongong Futures inquiry clearly showed the changing nature of the surrounding community and the need to be prepared for its future requirements. The report demonstrated that manufacturing related employment in the region had halved between 1981 and 1996 while employment in finance and property had more than doubled over the same period. Wollongong City Council has now developed ‘The Blue Mile’ Foreshore Master Plan and is seeking comment on it up until 15th October 2007. It is hoped that this submission will also be considered in this primary development context.

Indigenous communities have strong interest in South Coast development concerns

There appears to be potential for aquaculture and fishing related investment, research, education and development in the Illawarra and South Coast which closely involves indigenous communities. The Standing Committee on State Development of the NSW Legislative Council produced a Report on Fisheries Management and Resource Allocation in NSW in 1997 which noted government had received thousands of submissions in response to the call for nominations for recreational fishing areas. The State's coastal areas were divided into eight regions with a record 880 nominations received for region 7 (the area South of Wollongong to Narooma). In the Hansard of 11.4.2001 the Minister for Fisheries indicated that between 1998 and 1999 the NSW Government held 17 regional fisheries workshops with Aboriginal communities to develop an indigenous fisheries strategy. These communities primarily wanted:

- The cultural significance of indigenous fishing to be recognised
- More indigenous people involved in managing fish resources
- Greater community consultation with indigenous people

All the indicators of Wollongong community interest point towards further support and reinvigoration for the projects outlined below. With the requirements of the National Greenhouse and Energy Reporting Bill (2007) and the Abatement Incentives Program now being discussed, the following projects are proposed for further coordinated discussion and development with Illawarra residents and related stakeholders.

3. INITIAL PROJECTS FOR CONSULTATION AND FUNDING

Clean Energy Action Plan: Towards 50/50 by 2020 in the Bega Valley Shire

In 2007 the Clean Energy Working Group (PO Box 874 Bega, NSW 2550, admin@cleanenergyforeternity.net.au) produced a detailed 36 page plan which is suitable for the widest possible consideration and implementation. The organization is a voluntary climate change group in the Bega Valley. Its mission is to see the electorate engaged in a conversation about clean energy issues once a week; to raise the level of community knowledge and enable access to reliable information about clean energy issues; and to promote and stimulate relevant bodies to take appropriate action to reduce energy use and develop local clean energy generation projects. The group also seeks to inform voters on candidates' policies on clean energy for each election.

The Wollongong City Centre Plan and the Blue Mile Vision

The NSW Government identified six regional cities, including Wollongong, which are critical to the growth of NSW. In partnership with Wollongong City Council, the Cities Taskforce has been established to develop a vision for the city centre and planning documents supporting the Wollongong City Centre Plan have been produced to guide the city's growth. These include the Vision document; the Local Environment Plan; the Development Control Plan and the Civic Improvement Plan. Plan highlights included 10,000 new jobs; 6,000 more people; increased floor space in the city centre; increasing heights leading up to the railway station; Crown Street Mall revitalization; improving the

foreshore; developing the railway precinct; bus transport initiatives. Initial community consultations closed in September 2006.

The Blue Mile Vision is a related city planning vision to maximise Wollongong's attractiveness and advantages as a city by the sea. The Blue Mile Master Plan outlines the creation of a significant point of focus along the beautiful city foreshore. Pedestrian promenades, cycleways, foreshore parks, outdoor cafes and entertainment facilities are some of the elements which are now being considered in this context. The Foreshore Master Plan is on exhibition at Wollongong City Council until 15th October 2007.

The Hi-Tech Consulting Eco-City Proposal starting with a Ferry Service

In 2003 the Australian Business Foundation identified four key areas for action to expand the Illawarra economy. One was to invest in infrastructure that connects people and places in and between regions, particularly transport. Another called for investing in knowledge infrastructure to transform the region. In 2003 the state government agreed to turn Port Kembla into the car import capital of Australia with a \$167 million upgrade to the inner harbour. It is estimated that 32,300 cars and 10,000 containers per year will use Port Kembla instead of East Darling Harbour. The first car shipment occurred this month and the NSW Premier pointed out on ABC TV (5.10.07) that this will produce a major increase in road traffic, unless better forms of transport, such as train, are available cost-effectively. The potential for the development of ferry services is necessarily considered in this context of change in ports and their related rail requirements.

In 2004, to complement and assist implementation of the NSW 'Growing Together' Tourism Master Plan, Hi-Tech Consulting made a proposal to develop Wollongong as Australia's first Eco-City with the combined resources of Wollongong, Shellharbour, Kiama City Council, and the Illawarra Regional Tourism Organization. Key to the Hi-Tech proposal was the early construction of a wharf and ferry development centring on Wollongong. In 2004 Securities International Ltd indicated their interest in providing funding to the project, but it has not yet gone ahead. In preliminary meetings with Stephen Driscoll, State Manager of the Minor Ports Unit in the Department of Lands, Hi-Tech argued that pivotal to transforming Wollongong into Australia's first Eco-City is the development of a ferry terminus and fisherman's wharf at Belmore Basin, Wollongong. The development would act as a catalyst to further stimulate investment for the city and to develop the integrated foreshore and transport plan proposed towards an Eco-City.

The ferry project began in 1993 when Securities International Investment Bankers CEO, Stephen Duncan, first proposed a high speed ferry service between Gosford and Circular Quay and formed a business relationship with Frank Coluccio for this purpose. The objective of the Illawarra ferries would be to operate an international standard high speed ferry service to attract the international inbound, interstate and intrastate tourist market which would also be a catalyst to transform Wollongong into Australia's first Eco-City. The project funding estimates are based on a proposal for operating 2 round trips from Circular Quay, Sydney to Wollongong and Kiama Harbour 350 days per year. Further details of the proposed project are available for discussion from Hi-Tech Consulting.

Providing Development, Research and Education Support at Wollongong

The Wollongong Innovation Campus

The Wollongong Innovation Campus proposal arose because the University of Wollongong, in partnership with the state government, the private sector and local councils, is developing a new technology precinct at Brandon Park. It is expected that the site will become home to some of Australia's most innovative information technology, communications, film, television and multi media companies.

In 2000, representatives of Zernike were invited to Wollongong by Hi-Tech Consulting Pty Ltd to meet with the state member for Wollongong, Noreen Hay, the Deputy Lord Mayor, Kiri Jonovski and representatives of the University of Wollongong. The purpose was to assess the demand, viability and opportunity for Zernike in a joint venture with Hi-Tech Consulting to add value and expertise towards the future development of the Wollongong Innovation Campus. Zernike produced a lengthy report as a result of these meetings and its investigations, which is available upon request. The aim of the Wollongong Innovation Campus is to enhance the economic and cultural wealth of all participants by providing the best environment in the Asia-Pacific region for people and organizations to exchange and develop ideas, and deliver innovative outcomes.

The Innovation Campus site at Brandon Park is about 20 hectares and lies just to the north of the Wollongong central business district. It is a spacious, open environment close to the ocean with views of the coastline and escarpment. The site also lies on what is emerging as the 'Wollongong Research and Education Campus Corridor' which links the Wollongong Conservatorium of Music and Botanic Gardens, the University of Wollongong, the Illawarra Institute of TAFE, the North Wollongong Campus, the Keira Technology High School and Wollongong High School of the Performing Arts along the western side of the railway line. To the east of the railway is the Wollongong Innovation Campus, the recently constructed Wollongong Science Centre, the University's Hall of Residence at Campus East and the annex to the Wollongong Botanic Gardens.

Proposal for a Sustainable Industries Development Institute (SIDI)

Most recently, a Sustainable Industries Development Institute (SIDI) has been proposed for Wollongong. Its nucleus would form the largest and most multidisciplinary of the University of Wollongong's prestigious research institutes and provides the umbrella organization for the five research centres and groups of more than sixty senior academic staff who have built up an international reputation for quality environmental research and innovative teaching over more than a decade. The SIDI would aim to contribute to the advancement of academic performance and reputation by enhancing research, teaching, and consultancy work on sustainable industry development issues; by encouraging maximum coherence and collaboration in these activities and by presenting a clear and unified picture of them to the world.

The work of the Institute could encompass the broad range of environmental research expertise, which spans fundamental investigation of the Australian biota through to practical engineering and policy solutions for managing environmental problems. Wollongong researchers are interested in studies related to climate change and carbon market development, but are also concerned with the broader range of environmental accounting standards, environmental policy and regulatory frameworks to develop effective eco-exchanges. Many have related interests in biodiversity conservation and the development of the supporting conservation economy. Coastal, estuarine and catchment studies, water quality and management, and maritime and natural resource law and policy are also major interests.

Supporting education for skills development through website design

Research, information and education programs must be coordinated more effectively in Wollongong and its environs to support ecologically sustainable development and all its benefits. Promoting the new TAFE Graduate Certificate in Ecologically Sustainable Development requires consideration in this context, along with other relevant skills development. A presentation on Partnerships in Sustainability organized in Sydney by the IPAA suggested many possibilities for education provision. It was addressed by Megan Lynch, Associate Director, Green Capital, of the Total Environment Centre and Geoff Young, Manager of Community Education, NSW Dept. of Environment and Climate Change. The Total Environment Centre has developed partnerships with a wide range of large private sector players to achieve their joint sustainability goals, as well as with a range of suitable government and voluntary sector partners, through the Integrated Sustainability Education Partnership Program of the NSW Environmental Trust.

There is now a clear opportunity to support the total development context described above through website development which provides information to assist sustainability, including more open, flexible education. Curriki, (www.Curriki.org) is a comparatively new organization which has similarities with Wikipedia, except that it collects education content on its open website, rather than providing an encyclopedia function. Certification of competency is a separate but related issue. However, Curriki development is lacking for a variety of reasons and there is much room for improvement as well as future collaboration. Consideration should now be given to putting suitable open education content for health and sustainable development on a Wollongong based website which is also designed to address regional skills shortages as rapidly and effectively as possible.

For eleven years prior to March 2007, Carol O'Donnell taught health policy at Sydney University. She now offers a lot of free, basic education content. This aims to promote critical understanding of global development and awareness of how to identify and devise projects to promote health and sustainable development towards triple bottom line accounting in any local, regional or global community or industry context. She would like this basic education content to be considered for use in any relevant website development. All offers of education and related information should be considered.

Key Publications:

Clean Energy Working Group, The Clean Energy Action Plan: Towards 50/50 by 2020 in the Bega Valley Shire, Bega, 2007.

Department of Prime Minister and Cabinet, Early Action – Abatement Incentives prior to the commencement of the Australian Emissions Trading Scheme, Sept. 2007.
(www.pmc.gov.au/climate_change/emissions)

Environment, Communications, Information Technology and the Arts Committee, National Greenhouse and Energy Reporting Bill 2007 (provisions), Senate Committee Report, Canberra, 2007.

House of Representatives Standing Committee on Economics, Finance and Public Administration, Australian Manufacturing Today and Tomorrow, Canberra, 07.

McLean, B. and Elkind, P. The Smartest Guys in the Room: The Amazing Rise and Scandalous fall of Enron, Penguin Group, New York, 2004.

National Affordable Housing Summit, Improving Housing Affordability: A Call for Action, June, 2007, (www.housingsummit.org.au)

Owen, AD, Inquiry into Electricity Supply in NSW, Sydney, NSW Government, 2007.

Total Environment Centre, Neutral and Beyond: A Review of Carbon Neutrality and Offsets, Sydney, 2007.

Total Environment Centre, Carbon Neutral Watch – Corporates, Consultants and Credibility, Sydney, 2007.

WWF Australia, A Prosperous Low Carbon Future: WWF's proposal to reduce Australian greenhouse gas emissions by a third by 2030, Sydney, 2006.

WWF Australia, Blueprint for a Living Continent: A way forward from the Wentworth Group of Concerned Scientists, Sydney, 2002.