

April 2010

NEWS

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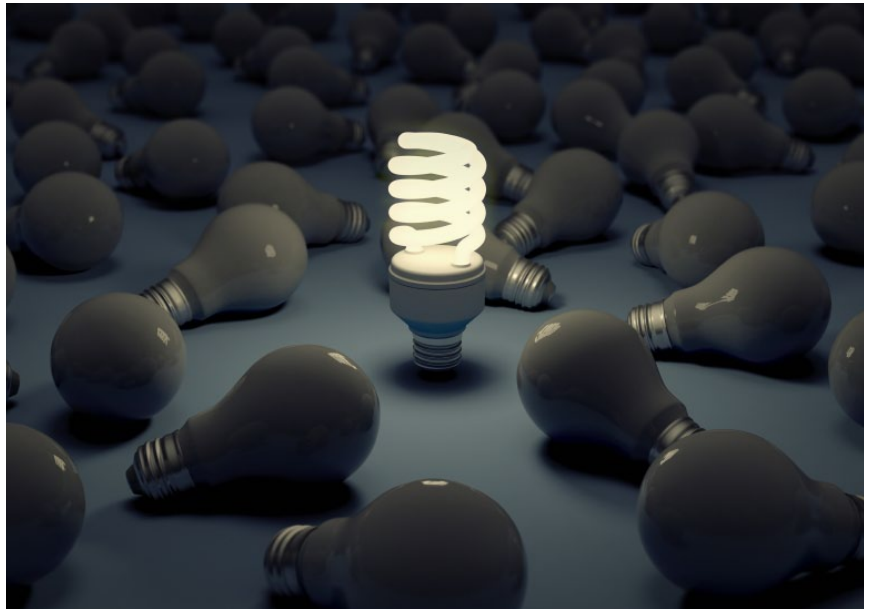
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(Photo: © iStockphoto/Evirgen)

REGULATING SUSTAINABILITY – is the BCA the answer?

All Australian governments are working in concert to improve the energy efficiency of the built environment. Although industry is contributing with voluntary initiatives, a key avenue for delivering government policy for buildings is the Building Code of Australia (BCA). Increasing energy efficiency has been the first significant front on which increasing the level of sustainability for Australian buildings has been legislated. Now the requirements for energy efficiency are not only increasing in the BCA but in a range of other regulated strategies which look at appliance and lighting efficiency, as well as mandatory disclosure of energy efficiency in buildings. The federal government as well as all state and territory governments are working at the highest level to further advance energy efficiency through the Council of Australian Governments (COAG).

Recently a government discussion paper asked what broader issues could be addressed, such as 'zero carbon' emissions for operational energy, and whether water, peak electrical loads and energy embodied in building materials should be considered as part of a framework for quantifying building performance going forward. Voluntary tools such as Green Star already seek to promote best practice and innovation to achieve advances in indoor environment quality, land use and ecology, and award progress towards these. Regulation however is about legal minima, and unlike voluntary tools which are often used to show leadership, changing regulation is restricted by political will, and needs to be moderated against industry capacity as well as any economic impacts for the whole of industry.

Where did the BCA come from?

The BCA as a national building code has a young lineage, dating from 1990. In 1989 COAG established a Building Regulatory Review Task Force, which eventually became the Australian Building Codes Board (ABCB) whose role is to develop and administer the BCA to enable minimum necessary standards of relevant, health, safety and amenity. The ABCB is controlled by a board, that although it has on it representatives of state and federal governments, acts independently of government, has an independent chair and includes representatives from the building industry. In 1996 the BCA reached another milestone with the inclusion of performance based measures.

How does the BCA fit within the energy efficiency agenda?

In 2000 the Australian Government announced that it had reached agreement with industry and state and territory governments to adopt a two-pronged approach to reducing greenhouse gas emissions from buildings, by:

- mandatory minimum energy performance requirements through the BCA; and
- encouraging best practice voluntary initiatives by industry.

Industry supported this two-pronged approach, taking the view that building-related matters should be consolidated in the BCA wherever possible.

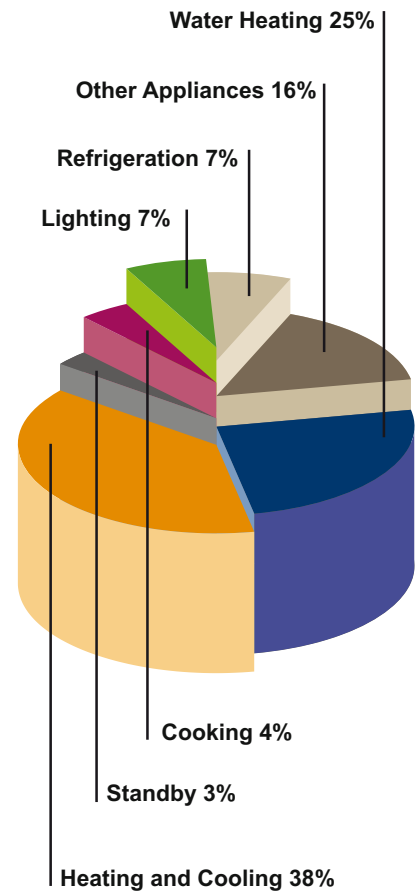
The ABCB added sustainability to the goals of health, safety and amenity, with energy efficiency provisions (the first sustainability aspect addressed) being added in BCA 2003. These provisions were largely limited to the thermal performance of the building envelope of housing, such as requiring insulation and sealing of the building envelope from air movement, and glazing requirements as well as insulation to hot water pipes and ductwork. (Prior to this some states and territories required energy rating of buildings via the BCA Appendix, and some councils, under planning legislation). These BCA energy efficiency requirements were embedded in 'deemed-to-satisfy' (prescriptive) provisions, although rating of computer modelled alternative solutions against a star rating system was also allowed. The latter opened up a great deal of flexibility in acceptable design solutions. The ABCB also continued development work on energy efficiency provisions for all other buildings.

In 2004, the Ministerial Council on Energy set up under COAG agreed to a comprehensive set of energy efficiency measures in the National Framework for Energy Efficiency (NFEES) that went beyond buildings. NFEES aims to achieve a major enhancement of energy efficiency performance by the increased uptake of energy efficient technologies and processes across the whole economy. NFEES Stage 1 included policies for:

- residential & commercial buildings
- commercial/industrial energy efficiency
- appliance & equipment energy efficiency
- trade and professional training & accreditation
- government energy efficiency
- commercial/industrial sector capacity building
- general consumer awareness
- finance sector awareness

Following BCA 2004, other residential buildings such as apartments, hotels and motels were added in 2005, while 2006 saw a lift in the stringency of the provisions for new housing modeling, targeting a five-star energy rating, which continued the holistic philosophy.

BCA 2006 also saw the inclusion of commercial buildings for the first time. Similar to the requirements for residential buildings, these included the thermal performance of the building envelope, and also lighting and Heating, Ventilation and Air Conditioning (HVAC). The test of stringency for deciding on the application of these measures was that they were to be "cost-effective" resulting in a cost to benefit ratio of 4.9:1. That is for every \$1 spent on these measures, there was almost a \$5 return over the life of the building. In simple terms, this meant for a building with a 50 year life span for example, the efficiency measures would take just over ten years to 'pay back'.



Residential energy breakdown
(Source: 'Home energy use 2008' Your Home Design for Lifestyle and the Future: Technical Manual, DEWHA, 2008.)

Lifting efficiency standards

In 2007 COAG agreed to Stage 2 which included policies for:

- expanding and enhancing the minimum energy performance standards for appliances
- a high efficiency systems strategy for HVAC
- phase-out of inefficient incandescent lighting
- government leadership through green leases
- development of measures for a national hot water strategy.

There were no changes in the level of energy efficiency provisions in the BCA between 2006 and 2009 however in April 2009 COAG requested a significant and very specific increase in the energy efficiency provisions for BCA 2010.

Following the Rudd Government's commitment to reducing greenhouse gas emissions by signing the Kyoto Protocol in December 2007, the BCA's focus on energy efficiency has been strongly linked with carbon emissions. This is reflected in the 2010 BCA where the emphasis of the stated objective has moved from "is to be capable of efficiently using energy" to energy efficiency being placed under the objective "to reduce greenhouse gas emissions".

Victoria was one of the first states to regulate a 5-star minimum thermal performance rating for new homes (under the 10-star NatHERS system) and found that in spite of the improved thermal performance, energy consumption in new housing was still increasing. This was discovered to be due largely to house size increasing and the high number of sales of air-conditioners. It brought out the limitations of only controlling the thermal performance of the building envelope without controlling built-in appliances or plug-in appliances and lighting. Doubling the house size, could mean doubling the heating/cooling. As regulating house size is difficult, expanding the scope of measures for residential buildings was needed. As a result, BCA 2010 includes:

	Class 1	Class 2	Class 4	Commercial
ACT	BCA 2010	BCA 2010	BCA 2010	BCA 2010
SA	BCA 2010	BCA 2010	BCA 2010	BCA 2010
QLD	BCA 2010 [#]	BCA 2009 [#]	BCA 2010	BCA 2010
NSW	BASIX*	BASIX*	BASIX*	BCA 2010
VIC	BCA 2009	BCA 2009	BCA 2009	BCA 2010
WA	BCA 2009	BCA 2009	BCA 2009	BCA 2010
TAS	BCA 2009	BCA 2009	BCA 2009	BCA 2009
NT	BCA 2009	BCA 2009	BCA 2009	Nil

Adoption of BCA 2010 by Jurisdiction

(Source: ABCB, 2010)

- 6-star thermal performance rating for new houses and an average 6-star rating in apartment blocks
- lighting energy limits in new houses and apartments
- efficiency requirements for hot water, swimming pools and spas in new houses.

For new commercial buildings the energy efficiency controls in BCA 2010 bring a general tightening of the existing measures in Section J as well as widening their scope. The measure of stringency was lifted from 4:9 to 2:1, meaning in simple terms, for a building with a 50 year life, the pay back period could be up to 25 years.

Although BCA 2010 applies from 1 May, state and territory governments are regulating compliance with the new requirements at various dates, under an agreement that national compliance will be in place for all jurisdictions by 1 May 2011. The above table indicates the current status.

How to advance sustainability going forward?

A common rating framework

COAG has built on and added to NFEE to create the National Strategy on Energy Efficiency (NSEE) which reaches beyond the Ministerial Council on Energy to engage all governments more broadly. Under this Strategy the COAG Senior Officials Group on Energy Efficiency recently put out a *Public Discussion Paper* to discuss a National Building Energy Standard Setting, Assessment and Rating Framework as part of the National Strategy on Energy Efficiency. In short, questions were posed about whether a common framework should be developed for building energy rating tools, whether such a framework should encompass legal minima and voluntary led best practice ratings, as well as existing and new buildings. Finally, to what extent could or should it be mandated through regulation?

continued

Maintaining efficient operation

There are currently limited regulatory controls to maintain the energy performance of existing buildings once constructed. The criticism of existing building regulations has been the 'set and forget' syndrome where systems in a new building, once a certificate of occupancy is issued, may not be regularly maintained, and thus not maintain their designed efficiency. Commercial buildings require periodic tuning and the correct operation of their mechanical systems to be efficient. And the energy efficiency of a house can easily be diminished during its life through interference with insulation for example (during down-light or ducting retrofitting within ceiling spaces).

Effective maintenance is an issue that is difficult to address in building law. Section I2 (the energy maintenance section in the BCA for non-residential buildings) has attempted to address this by requiring systems to be maintained at the level they were first approved, though there is no system for policing this. The level of responsiveness to these requirements is potentially quite different between a building owner/operator, and a speculative building developer.

Building monitoring is not required in the BCA, though monitoring equipment is now required for large buildings in BCA 2010, and in even larger buildings, energy use on individual services (e.g. lighting and HVAC) is required to be individually metered. Mandating the provision of monitoring equipment alone however still leaves the potential for failings in buildings that have not been commissioned properly, to go unaddressed.

Mandatory disclosure

The COAG Ministerial Council on Energy has developed proposals for mandatory disclosure of energy efficiency for commercial and residential buildings, which will expose underperformance of systems. However as disclosure is only proposed at point of sale or lease, this initiative will have limited reach, and still requires voluntary action on behalf of building owners to maintain existing systems.

Future potential

Setting end targets for low carbon or carbon neutral buildings has already happened in some countries such as the UK with its zero carbon 2016 target for new homes. If Australia is to set similar targets, the question needs to be answered about how much of the regulation required to achieve these targets should or could be achieved through the building code, as the BCA is about setting a benchmark for legal minima, not 'best practice'. Beyond targets there are a number of other interconnected issues that future building legislation could seek to draw together:

- The efficiency reporting structures proposed under mandatory disclosure are to be run by federal legislation which is separate to the state legislation that evokes the BCA.
- Currently the rating scales for voluntary and mandatory rating systems have top scores which vary between 5, 6 and 10 stars, and have no common metric.
- The computer-aided design programs in common usage by building designers are not those on which building energy ratings are assessed.
- End targets for other built environment sustainability criteria are not being discussed as yet.

The path ahead for increasing the sustainability of buildings via regulation such as the BCA, will require a lot of resolution if these matters are to be synthesised into a system that addresses government targets and industry capacity. The potential for the regulation of a common rating framework that manages to address all of these concerns might well lead to the significant gains sought in the energy efficiency of Australia's buildings.

Scott Willey

Resources:

The ABCB provides a number of handbooks, tools and education modules for free download from their website (abcb.gov.au). More are currently being developed in conjunction with industry and will be available in the next few months.

Handbooks:

- Applying Energy Efficiency Provisions to New Building Work Associated with Existing Class 2 to 9 Buildings (2010)
- Revised BCA Volume One Energy Efficiency Handbook
- Revised BCA Volume Two Energy Efficiency Handbook

Tools:

- Glazing calculators

Education modules:

- Module 4: Understanding Energy Efficiency Provisions for Class 2 to 9 Buildings
- Module 3: Understanding Energy Efficiency Provisions for Class 1 and 10 Buildings

From the Editor...

Please note that the contents of EDG are now listed in the relevant section under the Contents tab. The Index, and Author List are produced as a separate document which can be downloaded, and these too can be found under the Contents page.

www.environmentdesignguide.net.au/content

Scott Willey
Managing Editor

In this issue of EDG...

GEN 83: The Costs of Urban Sprawl – Infrastructure and Transportation

In this issue three companion papers are presented that look at the costs of urban sprawl in Australia as part of a study by the Curtin University Sustainability Policy Institute. The three authors Roman Trubka, Prof. Peter Newman, and Adjunct Prof. Darren Bilsborough drew on a number of existing studies to calculate the cost impact of greenfield suburban development over that of urban redevelopment or brownfield sites. The first paper discusses the cost of providing infrastructure and transport incurred by roads, drainage and utilities, as well as other services such as public transport, schools, hospitals, and emergency services.

GEN 84: The Costs of Urban Sprawl – Predicting Transport Greenhouse Gases from Urban Form Parameters

The study shows how greenhouse gases can be calculated for a residential development based on simple physical planning parameters such as the distance to the CBD, which is a reflection of distance travelled and a proxy for density, and transit accessibility. In an era where governments are increasingly aware of, and developing strategies for the mitigation of greenhouse gas emissions within their various jurisdictions, an understanding of the emissions generated by alternative development models is needed. This paper shows the redevelopment option in Australian cities is around 4.4 tonnes less greenhouse gas intensive per household per annum than the existing entrenched model of greenfield development.

GEN 85: The Costs of Urban Sprawl – Physical Activity Links to Healthcare Costs and Productivity

The final paper in this series of three discusses the health and productivity benefits of active-travel associated with the different residential urban forms due to levels of density, connectivity, and variety in amenity. It shows healthcare savings related to active forms of travel over a 50-year urban lifetime are quite small at \$2.3 million for 1000 dwellings. But if more walkable and cycle-able developments are pursued then the benefits to employment productivity are large — estimated to have a present value of \$34 million. This is a substantial benefit that is comparable in scale to the savings in transport and infrastructure, as well as the social costs of greenhouse gases, and should provide a critical input to urban planning decision-making.

DES 79: Drivers of Energy and Water Efficiency in Commercial Office Buildings

Commercial office buildings are known for their high energy use and are a prime target for the current focus on energy efficiency. Much is already known about building more water and energy efficient buildings and the systems they use, but what are the factors that drive efficient operation of these buildings? This paper looks beyond the physical building characteristics to the communication and management regimes of building managers, as well as the skills of those controlling the buildings for answers that will explain the broad variances of efficiency evidenced across builders of similar technology.

Australia

Home Insulation Scheme scrapped

The Rudd government has scrapped its \$2.5 billion roof insulation scheme only weeks after it promised to reintroduce rebates by 1 June. Assistant Minister for Energy Efficiency, Greg Combet made the announcement following the decision of cabinet and Allan Hawke's report into the scheme.

An estimated 1.1 million homes have installed insulation under the scheme. To address safety concerns from inappropriate installation practices, the government has promised to install safety switches in 50,000 homes and carry out safety inspections on another 150,000 homes.

www.environment.gov.au/minister/garrett/2010/mr20100210.html

Dr Hawke's report: www.climatechange.gov.au/-/media/publications/energy-efficiency/Home-Insulation-Hawke-Report.ashx

PM appoints Population Minister

Prime Minister Kevin Rudd has established a ministry of population growth, and appointed Agriculture, Fisheries and Forestry Minister Tony Burke to the new portfolio. Minister Burke is tasked with creating Australia's first national population strategy to deal with community concerns around forecasted population growth from 22 million to 35 million over the next 40 years. The Strategy is expected to be complete in a year.

www.governmentnews.com.au/2010/04/06/article/Rudd-establishes-Australias-first-Population-ministry/LOPTZTEYHS

Rudd Government shelves climate policy

The Rudd government will postpone its major climate legislation, the Carbon Pollution Reduction Scheme (CPRS), until 2013. The legislation was due for a senate vote in the May-June sitting of parliament, but the government has decided to pull the vote, citing opposition from Coalition and Greens senators.

The Green's alternative

To end the stalemate the Australian Greens have called for the introduction of an interim price on carbon. Greens leader Senator Bob Brown has written to the Prime Minister asking him to consider the Greens proposal to establish a \$20 per tonne levy on carbon for two years as a way to break the deadlock. The interim price will provide the government with time to reach agreement on its stalled CPRS legislation. The government's former chief climate change adviser Professor Ross Garnaut has backed the Green's proposal.

Other solutions

Meanwhile, a recent analysis shows that the Rudd government's most ambitious carbon reduction target of 25 per cent by 2020 could be met with a relatively low cost. The climate policy research group ClimateWorks Australia (a new non-profit organisation that is a partnership between The Myer Foundation and Monash University), has released its Low Carbon Growth Plan for Australia which

identifies the lowest-cost measures for reducing domestic carbon emissions. The report estimates the cost to households at less than \$4 a week.

The ClimateWorks' plan counters claims that the government's emissions trading scheme will lead to large price increases for consumers, but it has been criticised for being too weak. "The plan represents nothing more than benchmarks for mediocrity and is by no means the limit of what is achievable," says Patrick Hears, technical director for climate group Beyond Zero Emissions. "A larger effort is required for Australia to avoid dangerous climate change, and this will include substantially greater investments in renewable energy projects."

www.theage.com.au/environment/climate-change/25-emissions-cut-at-4-a-week-possible-20100315-q9nb.html

www.news.smh.com.au/breaking-news-national/greens-float-carbon-levy-with-govt-20100413-s62x.html

www.theage.com.au/environment/emissions-put-on-back-burner-20100426-tnc6.html

www.climateworksaustralia.com/low_carbon_growth_plan.html

<http://beyondzeroemissions.org>

Europe

Icelandic volcano reduces carbon emissions

The carbon impact of air travel came to the fore in April when it was revealed that the European air industry is more carbon intensive than the Icelandic volcano that grounded European flights for a week. Experts have estimated that the eruption of the Eyjafjallajökull volcano will lead to a small reduction of carbon emissions but will have no cooling effect on the planet.

www.guardian.co.uk/environment/2010/apr/19/eyjafjallajokull-volcano-climate-carbon-emissions

Renewable energy growth

In statistics released by the European Wind Energy Association, wind and solar renewable energy sources accounted for over half of Europe's new electricity generating capacity in 2009. Wind accounted for most of the increase with 39 per cent growth, followed by gas with 26 per cent, and solar with 16 per cent

www.enn.com/pollution/article/40993

Africa

South African push for green economy

The South African Public Works Minister Geoff Doidge has made a "call for action" to move towards a greener built environment. Addressing the Alive2green green building conference in Johannesburg, Doidge suggested South Africa's technical and manufacturing capacity gave it scope to lead internationally in greening the built environment. The Minister said that along with a green economy summit which is to be held in May, the Government will engage with industry to assess how South Africa can transition into a green built environment, and thereby create a greener economy and more jobs in green industries.

www.greenbuilding.co.za/content/alive2green/events.html

www.engineeringnews.co.za/article/sa-could-be-a-global-leader-in-greening-the-built-environment-doidge-2010-04-29

Asia & the Pacific

Indonesia to tap world's best geothermal resource

Indonesia will tap its abundant geothermal resources to dramatically expand domestic renewable energy production. President Yudhoyono hopes to have 44 operating geothermal plants with 4000 megawatts of capacity by 2014 to put the nation on track to meeting its carbon reduction targets of 26 per cent below business as usual levels. The initial phase of construction will cost \$12.9 billion.

🌐 www.smh.com.au/environment/energy-smart/indonesia-goes-to-ground-for-energy-20100430-tzbv.html

New Zealand Green Building Council

The New Zealand Green Building Council has appointed as the new chairman, Mr Dean Riddell, the longest serving board member of the NZGBC. The Council will soon appoint a new chief executive to fill the vacancy created by Jane Henley's appointment as chief executive of the World Green Building Council. Commenting on the NZGBC's adoption of the Green Star tool Mr Riddell said "Green Star has successfully provided a common language, quickly becoming an established and widely supported system for increasing the sustainability of new and existing buildings"

🌐 www.nzgbc.org.nz/main

Tuvalu disappointed over ETS delay

The island nation of Tuvalu has expressed disappointment about the Rudd government's decision to delay the implementation of the centrepiece of its national climate change policy agenda. Tuvalu is one of the world's most vulnerable nations to sea level rise.

🌐 www.abcasiapacificnews.com/stories/201004/2886092.htm

India & the Middle East

Commonwealth Architects focus on sustainability

The Sri Lankan Institute of Architects which hosted the Commonwealth Association of Architects conference in February featured many eminent figures in the global architectural fraternity, and was themed 'Rethinking Sustainability.'

🌐 www.slia.lk/tt/programme.php

Water scarce resource in the Arab World

Seventeen Arab countries now live below the water poverty line of 500 cubic metres annually, with 75 per cent of the surface water originating outside the Arab World's borders. Water experts from the Arab Administrative Development Organization are arguing for new

Americas

Largest US offshore wind farm approved

After almost a decade of opposition, the United States has finally approved its first offshore wind power project. The US \$1 billion project will consist of 130 turbines that can produce roughly 1.6 billion kWh of energy.

🌐 www.theenergycollective.com/TheEnergyCollective/64714

World People's Conference on Climate Change

In April, the Bolivian government hosted the World People's Conference on Climate Change. The objective of the summit was to produce a clear alternative to the Copenhagen Accord which was the result of international negotiations in December last year. The result of the conference is the People's Agreement which outlines steps to reduce global emissions and a Universal Declaration of the Rights of Mother Earth.

🌐 <http://pwccc.wordpress.com>

🌐 www.beyondzeroemissions.org/world-people%E2%80%99s-conference-climate-change-final-day-100424

Central America's largest skyscraper aims for LEED platinum

The proposed skyscraper Torre Reforma to be built in Mexico City is aiming for LEED Platinum certification. The 46 storey mixed-used development will be the tallest building in Latin America and is expected to be completed in late 2011.

🌐 <http://inhabitat.com/index.php?s=torre+reforma>

strategies to improve water management in the region and prepare for the effects of climate change. In some countries such as Jordan, residents rely on bi-weekly water deliveries to their homes.

🌐 www.enn.com/lifestyle/article/40895

India set for solar powered cell phone towers

India's Ministry of New and Renewable Energy will set standards for mobile transmission towers that mandate operators power their utilities with solar power. The move will slow India's rapidly growing carbon emissions by 5 million tonnes of greenhouse gases and save \$1.4 billion.

🌐 www.inhabitat.com/2010/03/25/solar-cellphone-towers-in-india-to-save-5-million-tons-of-co2-and-1-4-billion

Projects



The energy management screen shows residents at a glance their energy consumption throughout the house (Image courtesy of La Trobe University)

Australia's First Emissions Free Home

Australia's first Zero-Emissions House (AusZEH) has been launched in the outer-Melbourne suburb of Laurimar, 30kms north of the CBD. The project is the result of collaboration between the CSIRO, La Trobe University, Sustainability Victoria, SP AusNet, Telstra, the Victorian Department of Human Services, and industry partners Delfin Lend Lease and Henley Property Group.

Designed to meet local climate conditions as well as the needs of the typical middle-income family, the Zero Emissions House has received an eight-star energy-efficiency rating and was built using off-the-shelf building and renewable energy-generation technologies and energy management systems. As part of an ongoing research project, a family will live in the home for 12 months to help the AusZEH consortium evaluate the energy consumption behaviour of the occupants.

The project demonstrates the technology that will help reduce the greenhouse gas emissions generated by Australian homes, which contribute nearly 13 per cent of the nation's annual emissions. "CSIRO scientists estimate that if all the new housing built in Australia between 2011 and 2020 were zero-emission houses, 63 million tons of greenhouse gas (GHG) emissions would be saved," said Director of CSIRO's Energy Transformed Flagship, Dr Alex Wonhas. "This would be equivalent to taking all of Australia's private cars off the road for two years and 237 days, or closing all of Australia's power stations for up to 100 days."

www.csiro.au/news/Doors-open-on-Australia-first-zero-emission-home.html



The Australian Zero Emissions House in the outer-Melbourne suburb of Laurimar



The garage of the display home houses educational material explaining the house's energy performance with the aid of extensive sub-metering

Pavement to Parks initiative in San Francisco



Before and after - The “Castro Commons” at 17th and Castro Streets
(Image courtesy San Francisco Planning Department - Pavement to Parks)

San Francisco is implementing an innovative experiment in new urbanism. The bayside city is temporarily transforming underutilised public roadways and pedestrian crossings into people-friendly plazas and parks under the “Pavement to Parks” program. San Francisco planners have drawn on the recent experience of New York City where parts of Times Square have been closed to traffic creating new spaces for the public to enjoy. The temporary transformations have used easily movable pot plants and garden beds to accommodate

design changes that are made during the trial period. New landscaping, seating and treatment of the asphalt are being used to demarcate the public open. The success of these trial projects will be evaluated to determine whether the City will permanently reclaim the sites as public open space, and to inform whether additional projects will be undertaken.

🔗 <http://sfpavementtoparks.sfplanning.org>

Facelift for Sydney tower

What has been described as Sydney’s ugliest tower may soon get a facelift with architecture firm Laboratory for Visionary Architecture (LAVA) proposing an innovative plan to ‘reskin’ the building. Under the plan the University of Technology Sydney tower would be coated with a translucent high performance textile skin. The new skin would create a micro climate, reduce the energy required for HVAC, and even generate its own electricity from solar cells.

🔗 www.thegreenpages.com.au/index.asp?page_id=1578



UTS Tower in Sydney with Innovative New Skin
(Image courtesy of LAVA – Laboratory for Visionary Architecture)

Sustainable Cities



Melbourne 1200 Buildings Initiative
(Image courtesy of Melbourne City Council)

Melbourne green office tower initiative

The City of Melbourne and State Government of Victoria are partnering on a project to retrofit more than two thirds of Melbourne's commercial buildings. The sustainability initiative, the first of its kind in Australia, aims to retrofit 1200 commercial buildings in Melbourne's CBD. "The 1200 buildings program is one of the greatest economic and environmental opportunities we have and will place Melbourne at the cutting edge of the green building movement," says Lord Mayor Robert Doyle. The initiative is expected to create 800 new green jobs and generate \$1.3 billion in economic activity.

www.melbourne.vic.gov.au/1200buildings/Pages/Home.aspx

Housing affordability crisis

Australians under the age of 30 are pessimistic about the prospect of buying their first home with a recent survey finding over half of those who participated said they would defer buying their first home because of affordability issues. Ten per cent more respondents said this than in the previous year's survey.

New research conducted by the Victorian Council of Social Services (VCOSS) has found that one in 10 'affordable' rental properties are unfit for human habitation. The organisation deployed a team of "secret shoppers" to inspect over one hundred properties from a cross-section of suburbs in Melbourne and Geelong, who found many of the affordable rental properties were on the market even though they had inadequate cooking facilities and presented health hazards to inhabitants. VCOSS have used the research to launch its Decent Not Dodgy campaign aiming to improve the standard of rental properties, and have called on the Victorian Government to reform the Residential Tenancies Act to include basic living standards for rental properties."

www.abc.net.au/news/stories/2010/04/21/2878329.htm

www.smh.com.au/national/the-impossible-dream-20100417-sljf.html

www.theage.com.au/victoria/slum-shock-as-vcooss-lifts-the-rental-lid-20100407-rs78.html

Melbourne leader for sustainable cities research

The City of Melbourne is positioning itself as a leader in the sustainability of cities. The UN Global Compact Cities Programme based at Melbourne's RMIT University is advising business, government and civil sectors on how to plan and build sustainable cities. The City of Melbourne participated in a pilot project assisting in the development of a methodology to effectively address the sustainability challenges facing cities.

"The central tool within the Cities Programme is being utilised by 13 cities who have taken on major projects which demonstrate leadership and innovation at an international scale," said Professor Paul James, Director of the Cities Programme. "Current projects span all continents and show improvements to topical urban issues including the role of business in climate change, slum rehabilitation, water management and the prevention of unethical behaviour." The research methodology is detailed in the Sustainable Cities UN Global Compact Cities Programme, Volume 1, which was launched at the UN Habitat World Urban Forum held in Rio de Janeiro in March.

www.rmit.edu.au/browse;ID=9uolc07zys1y;STATUS=A



Sustainable House Day 2010

In September hundreds of sustainable homes around Australia will open their doors to the public for free for Sustainable House Day. The national event showcases sustainable houses, providing people with the opportunity to learn about and explore real examples of sustainable design. Architects and builders will be present at many of the homes to explain design principles and provide tips.

🔗 www.sustainablehouseday.com



Sustainable House Day demonstrates the application of sustainability principles such as this house's extensive utilisation of thermal mass.

(Image courtesy Judy Clemens, Shmeco)

Climate Change

Call for budget action on climate change

On the eve of the 2010 federal budget, leading climate advocates and organisations representing thousands of Australians signed an open letter to the Prime Minister calling on his government to embrace a nation-building approach to climate change. "Australia needs a nation-building project for climate change with the scale and vision of a Snowy Mountains Scheme for the 21st Century," the letter states. "Such an initiative will drive our transition away from fossil fuels towards a clean, renewable energy economy. Signatories, including the likes of author's Clive Hamilton, Guy Pearse, Professor David Karoly, as well as leading progressive organisation GetUp!, express their concern that the Labor government has still not proposed or implemented measures to rapidly decarbonise the Australian economy. They call for a massive increase in "renewable energy and climate-friendly infrastructure," the level of which should match the amount the government is prepared to invest in the National Broadband Network at a minimum.

🔗 www.beyondzeroemissions.org/media/releases/frustrated-rudd%E2%80%99s-ets-backflip-thousands-call-massive-federal-budget-investment-renew-100510

Australian Government climate change position paper

The Australian Government has released a position paper for climate change adaptation. Adapting to Climate Change in Australia, which sets out the Rudd government's vision and practical steps for adapting to the impacts of our changing climate. The position paper identifies six national priority areas for action: water, coasts, infrastructure, natural ecosystems, natural disaster management, and agriculture.

🔗 www.climatechange.gov.au/publications/adaptation/position-paper.aspx

Re-tooling for climate change

The Commonwealth is implementing a funding program under the auspices of AusIndustry to help Australia's manufacturers re-tool and reduce their climate impact. The Re-tooling for Climate Change program provides grants to small and medium sized manufacturers of \$10,000 to \$500,000 to undertake projects that improve the energy and water use of production processes.

🔗 www.ausindustry.gov.au/InnovationandRandD/Re-toolingforClimateChange/Pages/Re-toolingforClimateChange.aspx

Fast train back on the national agenda

A High-Speed Rail (HSR) line between Melbourne and Sydney is back on the national agenda courtesy of the Greens. Senator Bob Brown has called on the Rudd government to fund a \$10 million study identifying the best route for connecting Australia's two largest cities with HSR. Senator Brown's request comes amid renewed interest in high-speed rail globally. The Obama administration invested \$8 billion in last year's economic stimulus for HSR projects in Florida and California to lay the foundation for a national network. China has recently announced plans to build the world's largest HSR network connecting London to Beijing and then Singapore. China is now negotiating with several nations so it can complete the project by the end of the decade.

🔗 www.theage.com.au/environment/greens-to-push-40bn-fastrail-link-to-sydney-20100422-tfvj.html

🔗 www.whitehouse.gov/blog/09/04/16/a-vision-for-high-speed-rail/

🔗 www.smh.com.au/travel/travel-news/china-to-build-highspeed-rail-link-to-europe-20100309-pvuf.html

Melbourne and Sydney fail world 'metro' test

Australia's largest cities Melbourne and Sydney are among the world's six big cities not to have a high-frequency metro train system. A study by the Public Transport Users Association finds that out of the 30 largest cities in the developed world, 24 are serviced by metro-style train systems. Melbourne and Sydney joined the American cities of Dallas, Houston, Detroit, and Phoenix as the six without frequent and reliable trains.

🔗 www.theage.com.au/national/melbourne-trains-fail-world-metro-test-20100402-rjuu.html

City bike hire scheme

Melbourne is set to launch its public bike hire scheme with the opening of 10 bike docking stations. The scheme will allow members of the public to hire low-cost bikes from popular sites at pick up/drop off points within the city. Melbourne will join cities including Lyon, Barcelona, Stockholm and Paris that have installed similar schemes in their inner city areas.

🔗 www.theage.com.au/victoria/melbourne-a-step-closer-to-city-bike-hire-scheme-20100317-qdm0.html



Melbourne Bike Share – Expect to see hundreds of these blue bicycles around Melbourne
(Image courtesy of RACV - Melbourne Bike Share)

Murray-Darling indicator sites selected

The Murray-Darling Basin Authority has announced 18 sites along the Murray-Darling river system as special "indicator" sites. The sites, including Lake Albury, Gwydir Wetlands, and The Coorong, will be used to monitor the health of the river system and determine the amount of environmental flows required. Environmentalists from the Australian Conservation Foundation say that the plan should look at the overall health of the river system, not just specific sites.

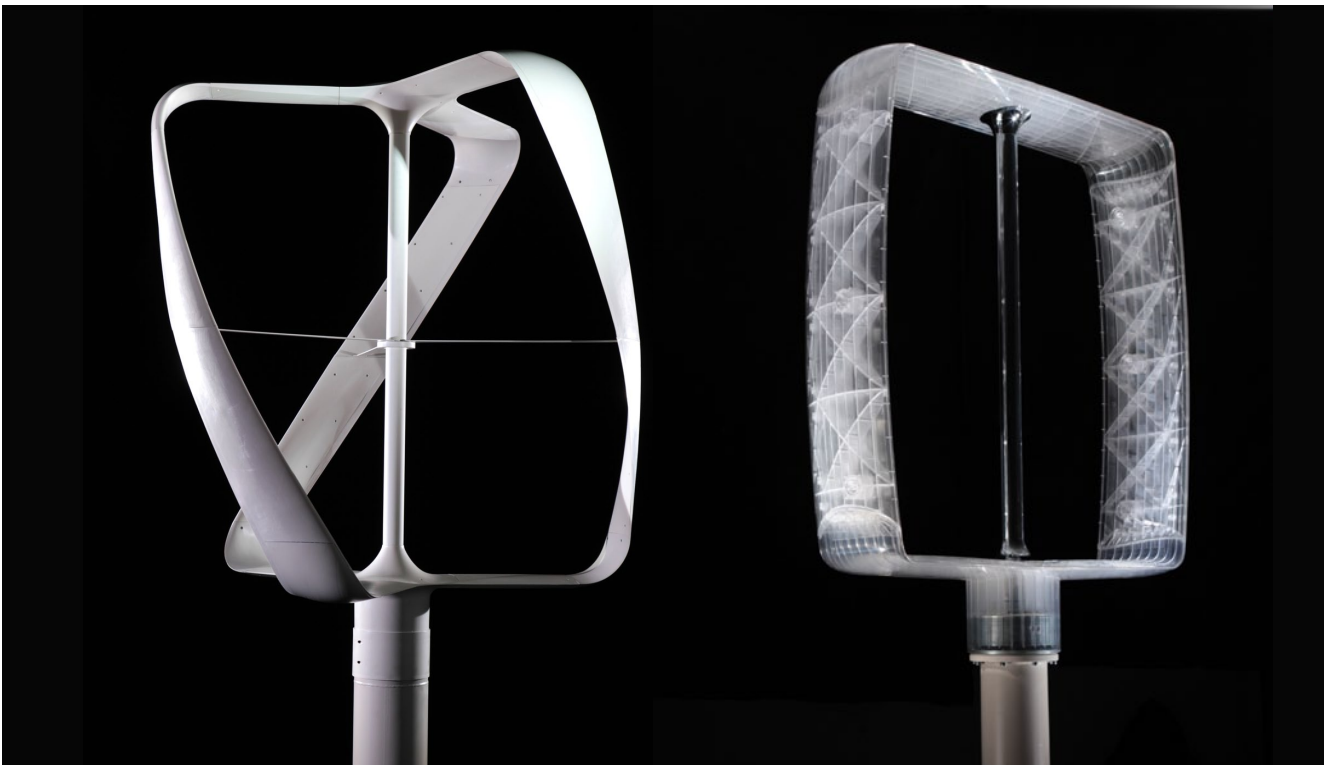
🔗 www.theage.com.au/environment/murray-gauge-sites-not-enough-20100407-rs7h.html

Maldives to fight sea level rise with floating islands

The Maldives government and Dutch Docklands have signed an agreement to design and build floating housing and tourism facilities to help the island nation cope with sea level rise. Developing a floating golf course and conference facilities will help maintain tourism which is a major component of the Maldivian economy. The Dutch will design the artificial islands to minimise the impact on under sea life and coastal morphology.

🔗 www.presidencymaldives.gov.mv/4/?ref=1,5,3604

🔗 www.inhabitat.com/2010/03/05/maldives-to-fight-rising-sea-levels-with-floating-islands/koen-olthuis-maldives-island/



Darrieus style wind turbines designed by Phillippe Starck for use in low or turbulent wind environments (Image courtesy of Pramac)

Domestic wind turbines by Philippe Starck

European wind energy firm PRAMAC has developed two vertical axis wind turbines for domestic use, which they claim operate noiselessly. Unlike horizontal turbines, the models are capable of harnessing the kinetic energy of turbulent wind for electricity generation, for wind speeds as low as 3 m/s.

🔗 www.pramac.com/Europe/en/Micro-Wind-Turbines_01-02-2010.asp Awards

Energy innovation rewarded

Air Conditioning Refrigeration and Building Services industry has awarded Nirosha Munasinghe as its first Young Achiever of the Year. Mr Munasinghe was recognised for pioneering the first Australian-made BACnet open protocol smart control system which has led to significant energy savings and carbon reductions from heating and cooling systems used in the commercial building sector. Built Ecology and WSP Lincolne Scott were acknowledged by winning the Environmentally Sustainable Design Project Leadership Award for their work on the new Melbourne Exhibition and Convention Centre.

🔗 www.arbs.com.au/PG-industry-awards-about-the-awards.aspx

Spanish company plans solar plant for Australia

Spanish energy and construction company Cobra Energy is seeking Commonwealth support to build one of the world's largest solar-baseload power plants. Funding for the proposed 250MW solar project is sought under the Rudd government's \$1.5 billion Solar Flagships initiative which aims to generate 1000 megawatts of electricity by 2015. Cobra Energy has operational solar plants in Spain capable of producing electricity nearly 24 hours a day by storing the solar energy in molten salts, and is planning to build scaled-up projects at three sites in Australia. According to Cobra Energy's Australian chief, Alan Atchison, the firm will partner with local construction company John Holland to build the baseload solar thermal plants. The government will announce the successful projects later this year.

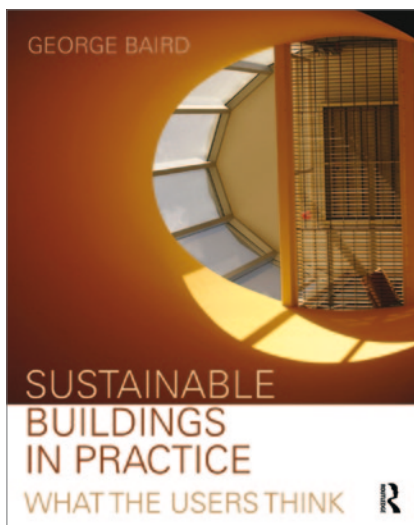
🔗 www.theaustralian.com.au/business/spanish-giant-has-plans-for-1bn-solar-energy-plant/story-e6frg8zx-1225841104462

Solar fire threat a beat up

According to the Australian solar industry, reports claiming that solar photovoltaic cells threaten to cause house fires need to be put in context. Chief Executive of the Australian Solar Energy Society, John Grimes, suggests government subsidies have been successful and should not be compromised by the actions of a "handful of rogue installers who have failed to meet stringent installation standards."

🔗 www.modernsolar.com.au/downloads/news/solar-fire-threat-a-beat-up.pdf

Publications & Reports



Sustainable Buildings in Practice: What the Users Think

Sustainable Buildings in Practice presents 30 case studies, exploring the users' perceptions of some of the world's most cutting-edge, sustainable buildings. The book details the perceived comfort, health and productivity experienced by occupants of green buildings.

Sustainable building assessment methods do not adequately account for the building users' needs, even though their salary costs exceed those of capital expenditure and operational costs. EDG author George Baird, Professor of Building Science at the School of Architecture at Victoria University, argues in his new book that the needs of occupants can't be ignored when assessing the sustainability of buildings. This book will help architects and engineers, facility managers of commercial and institutional buildings, as well as developers and researchers, academics and students develop a greater understanding of the human side of sustainable design.

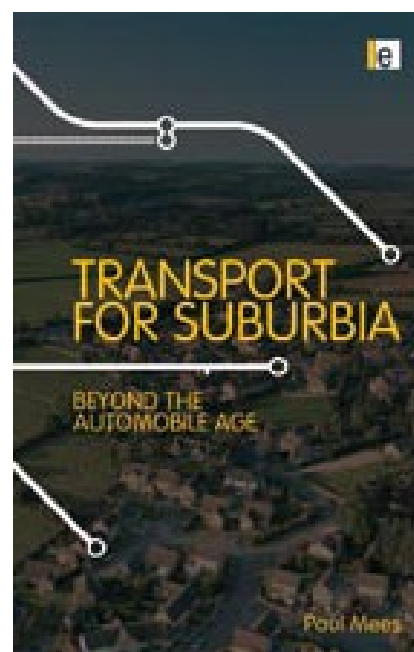
📄 www.routledge.com/books/details/9780415399326

Transport for Suburbia: Beyond the Automobile Age

RMIT University's transport planning expert Dr Paul Mees has written a new book exploring effective models for public transport. In *Transport in Suburbia*, Mees outlines alternative pathways for developing efficient transport systems free from the problems caused by automobile dependence.

This book argues that the secret of 'European-style' public transport lies in a generalisable model of network planning that has worked in places as diverse as rural Switzerland, the Brazilian city of Curitiba and the Canadian cities of Toronto and Vancouver. It shows how this model can be adapted to suburban, exurban and even rural areas to provide a genuine alternative to the car, and outlines the governance, funding and service planning policies that underpin the success of the world's best public transport systems.

📄 www.earthscan.co.uk/?tabid=92752



Bushfire shelter standard

The Australian Building Codes Board (ABCB) has released a Performance Standard for the design and construction of private bushfire shelters. The ABCB say the standard is based on available technical data, the input and judgment of a multi-disciplined expert reference group and consultation with a range of stakeholders. Performance Requirements are expected to be included in the public comment draft of the next edition of the BCA to be released in June 2010 and published in early 2011.

📄 www.abcb.gov.au/index.cfm?objectid=63B50DAF-53FF-11DF-AA90001143D4D594

Victoria

Developers push skyscrapers population growth solution

Local property developers, Lorenz Grollo and Tony Brady, have sparked debate about city planning by declaring skyscrapers as the answer to Melbourne's rapidly expanding population. City planners are seeking to accommodate Melbourne's surging population, projected to reach seven million people by 2050, by making better use of available land. Not everyone agrees with Messers Grollo and Brady's assessment. Director of Design and Culture for the City of Melbourne, Professor Rob Adams advocates for targeted low-rise development. Adams argues that greater environmental efficiency and high-density can be achieved without more skyscrapers.

www.theage.com.au/victoria/highrise-push-to-halt-urban-sprawl-20100315-q9n5.html

Melbourne to host United Nations conference

Australian Foreign Minister Stephen Smith announced that Melbourne would host the sixty-third United Nations Department of Public Information/Non-Governmental Organisation (DPI/NGO) Conference this August. The focus of the event is global health as it relates to the Millennium Development Goals (MDG). According to the United Nations the MDGs are the internationally accepted road map for poverty reduction and development.

www.un.org/News/Press/docs/2010/ngo692.doc.htm

Planning scheme amendment to map Melbourne's future growth

The City of Melbourne has endorsed a new planning strategy to deal with the city's future growth and development. The Municipal Strategic Statement (MSS) outlines the municipality's plans to accommodate development over the coming decades including key development sites which include the City North, Southbank, Kensington, West Melbourne, E-Gate and Docklands precincts. The MSS which is now awaiting the approval of the state planning minister, is available for download.

www.melbourne.vic.gov.au/AboutCouncil/Meetings/Lists/CouncilMeetingAgendaItems/Attachments/7821/5.1%20pdf.pdf

www.melbourne.vic.gov.au/AboutCouncil/MediaReleases/Pages/irststepinplanningschemeamendmenttomap.aspx

Tasmania

Forestry round table to include conservationists

Hundreds of job losses caused by a downturn in woodchip exports has led to the Tasmanian Government calling for a roundtable which will include conservationists and industry stakeholders. Industry sources say approximately 1100 workers have lost their jobs in the last nine months. The ABC reports the Premier David Bartlett saying the future of the industry in Tasmania is dependent on a new approach which engages the environment. A second assistance package for forest contractors worth \$3.6 million has also been announced.

www.abc.net.au/news/stories/2010/05/14/2899873.htm

www.abc.net.au/news/stories/2010/05/14/2899283.htm

Ramping up recycling message

Tasmania's waste management bodies has joined forces for a new cross-media campaign to educate people about what can and cannot be recycled. With most of the state now having kerbside collection the campaign is targeting the 25 per cent of what is in Tasmanian garbage bins that could actually be recycled. A new website offers information on what recycled materials are made into and also recycling tips

www.abc.net.au/news/stories/2010/04/19/2876301.htm

recycletasmania.com.au

Electronic lodgement of development assessments

Hobart City Council and Northern Midlands Council will now accept electronic copies of Development Applications.

Bricolage Design Prize

The Bricolage Design Prize is an annual event to encourage entrants to develop an ongoing, marketable product from a reliable source of non-hazardous waste. In 2010 designers and innovators are encouraged to apply for either the \$4000 Major Prize or the \$500 Bright Ideas Prize. The challenge is to make an original, durable, marketable product comprising a significant proportion of waste material(s).

www.environment.tas.gov.au/index.aspx?base=4544

Northern Territory

NT homes catch up with 5 star

In February, the NT Government announced that new homes in the Territory will need to achieve a 5 star energy performance from May. This is a rise from the former requirement of 3.5 stars for houses, though Class 2 buildings will still only require 3.5 stars. Although the Council of Australian Governments (COAG) last year committed to lifting the energy rating of new residential buildings to 6 stars in the 2010 Building Code of Australia (BCA) the Territory is among several jurisdictions who have not yet implemented this.

www.nt.gov.au/lands/building/regulations/notes/documents/BuildingNote68.pdf

www.abcb.gov.au/index.cfm?objectid=7384D70A-28B9-11DE-835E001B2FB900AA

Energy efficiency resources

The NT Government's Sustainability Unit has recently added a technical guideline on lighting energy efficiency to the number of resources available on its website. The Government commissioned private consultants to undertake an efficiency

study of the Royal Darwin Hospital. The lessons learned from this were combined with information from the community group called Coolmob to create How to save lighting energy in existing commercial buildings, as a part of the Government Energy Efficiency Program (GEEP). The guide is downloadable from the GEEP webpage.

www.nt.gov.au/dlp/sustainability/index.shtml

www.nt.gov.au/dlp/sustainability/geep/index.shtml

South Australia

Inaugural SA Design Commissioner

Professor of Architecture at the Carnegie Mellon University in Pittsburgh USA and recent SA 'Thinker in Residence' Laura Lee has been named South Australia's first Design Commissioner. Professor Lee, an Honorary Fellow of the Australian Institute of Architects, will spearhead the state's new Commission for Integrated Design that is tasked with providing the government with strategic advice about design of the built environment.

www.designtaxi.com/news.php?id=31680&page=1

SA new homes now 6 star

The newly re-elected Rann government announced that from 1 September this year new South Australian homes will require a minimum six-star energy efficiency standard. "Residential buildings comprise about 12 per cent of total energy consumption in Australia", Minister for Urban Development and Planning Paul Holloway said. "Going from a five to six-star rating is expected to decrease energy loads for heating and cooling by 23.2%, which can deliver up to \$340 a year in savings to homeowners depending on the size of the house and number of rooms."

www.planning.sa.gov.au/index.cfm?objectid=1F055C05-96B8-CC2B-6908A5F48EEF5DD5

Western Australia

Light rail push for Perth

A \$315 million light rail line linking the University of WA to Canning Bridge has been proposed for the City of Perth and metropolitan area by Peter Newman and Jan Scheurer from the Curtin University Sustainability Policy Institute. The Knowledge Arc Light Rail report proposes the next phase of Perth's public transport development with light rail that would be able to carry four times as many commuters as buses and travel at speeds up to 110 km per hour. This is the first of what Professor

Newman suggests could be 12 light-rail routes across the metropolitan Perth.

<http://au.news.yahoo.com/thewest/au/-/breaking/7141355/light-rail-proposal-for-city/>

WA poised for Australia's largest solar plant

Renewable energy development company Mid West Energy has unveiled plans to build the largest solar-thermal power

plant in the Southern Hemisphere. The company has proposed the construction of a 200 megawatt installation near Perenjori. Managing director Richard Harris points to the combination of excellent solar resources and proximity to existing electricity infrastructure as the reason for the siting of the plant.

www.abc.net.au/news/stories/2010/05/03/2888964.htm

Queensland

Draft Greenspace Strategy

The Queensland Government has released the draft Queensland Greenspace Strategy to meet the ambitious 2020 target of protecting 50 per cent more land for conservation and public recreation purposes. Public submissions have been sought on the draft which proposes five key planning actions:

- promote additional green space
- introduce better planning processes, tools and instruments to increase green space
- remove arbitrary barriers that limit public access to state-owned land
- encourage recreation opportunities on private land
- investigate the potential to use surplus state-owned land as green space

☞ www.dip.qld.gov.au/greenspace

Energy efficiency standard on the way

The cabinet has reassured Queenslanders that the state's sub-tropical and tropical climate will be accounted for when implementing a new 6-star (or equivalent) energy efficiency standard. The changes which took effect for new houses and townhouses and major renovations from 1 May 2010, will be made through an amendment to the Queensland Development Code (QDC) 4.1 – Sustainable buildings. Following a Tropical Design stakeholder forum held in Cairns to discuss a range of implementation options for 6-star, the government is drafting a proposed amendment to QDC 4.1 to implement 6-star (or equivalent) which addresses key industry concerns. Minister for Infrastructure and Planning Stirling Hinchliffe said "There is typically less benefit of a higher star rating in tropical and sub-tropical climate zones...For this reason, I'm approving the amendment so our unique climate is taken into consideration."

On 30 April 2009, the Council of Australian Governments (COAG) announced the introduction of the 6-star (or equivalent) requirements in the Building Code of Australia (BCA) 2010, commencing 1 May 2010. Under the COAG agreement, all jurisdictions have undertaken to adopt 6-star by 2011.

Designers and architects will be able to use a range of styles and energy-efficient features to comply with the new requirements, including:

- northern orientation of living rooms
- minimising east and west-facing walls and windows
- wider eaves and awnings for shading
- increased insulation
- treated glazing, particularly for windows facing west and north-west
- light-coloured roof and walls
- natural ventilation through windows and doorways
- ceiling fans in living areas and bedrooms.

Mr Hinchliffe said an outdoor living area credit could still be used to achieve 6-star, as well as a one-star credit which will be given if a house or townhouse has a solar photovoltaic (PV) system (of 1kW minimum capacity) installed. "Suspended timber floors will not have to be insulated, and the iconic Queenslander style home will still be able to be built."

☞ Fact Sheet: www.dip.qld.gov.au

☞ www.cabinet.qld.gov.au/MMS/StatementDisplaySingle.aspx?id=69067

ACT

ACT Govt alliance on electric vehicles

The government of the Australian Capital Territory and the Renault-Nissan Alliance will partner to encourage the use of zero-emissions vehicles in the ACT, after signing a Memorandum of Understanding. ACT Chief Minister Jon Stanhope said "The reduction in carbon emissions through the uptake of EVs may be an important step in reducing our carbon footprint, and working toward our goal of a carbon neutral ACT by 2060." Australian CEO, Mr Dan Thompson said: "Our company is leading the world in the design and production of a battery-powered family-sized car and we aim to have this vehicle on sale in Australia by 2012."

☞ www.chiefminister.act.gov.au/media.php?v=9390

Smaller solar feed-in tariff

The Independent Competition and Regulatory Commission (ICRC) has made a recommendation to cut the ACT solar feed-in tariff from 50 to 45.7 cents per kilowatt hour of electricity generated. The Commission, which was initially suggesting an even higher cut, was seeking to find the balance between attracting people to the solar scheme while being fair to people who cannot participate, and is pushing for the Government to pay larger generators the same figure instead of a reduced rate.

☞ www.abc.net.au/news/stories/2010/03/15/2846076.htm

New South Wales

Solar panel factory reopens in Sydney

The southern hemisphere's largest solar-panel factory opened in Sydney this April, after the existing plant was purchased by SilexSolar from BP Solar after BP Solar decided to source solar panels from China. The facility is expected to produce around 10,000 rooftop solar panel systems capable of generating 15 megawatts worth of electricity per year. The purchase represents a major boost to the solar industry and will allow Australians to purchase domestically produced solar-panels. SiliexSolar, a subsidiary of the Australian nuclear research company Silex Systems, says it has the capacity to increase production from 15 to 50 megawatts per year to meet more than 10 per cent of Australia's demand.

🔗 www.theage.com.au/environment/energy-smart/solar-panel-factory-sees-the-sun-again-20100414-s7z6.html

🔗 www.smh.com.au/environment/energy-smart/solar-panel-factory-sees-the-sun-again-20100414-s7z6.html

Planning regulations eased for renewable energy

The NSW Department of Planning is seeking to amend planning legislation to ensure that householders can install renewable energy technologies. The Minister for Planning, Tony Kelly, said the changes seek to allow property owners to more easily install their own wind and solar photovoltaic systems, and control visual impacts to ensure, in particular, that higher-density urban areas will not end up looking like turbine jungles. According to the Department of Planning the proposed changes are for:

solar systems:

- 10-day complying development approvals can be granted for ground-mounted solar energy systems no more than 10 metres in height, and occupying an area less than 10,000 sq/m, in rural, industrial and special purpose zones
- Boundary setback limits for these types of development and other planning controls apply
- Building-mounted solar systems with a generating capacity of less than 20kW which meet other planning provisions can proceed without any planning approval
- Ground-mounted systems up to 1,000 sq/m in size which preserve local amenity are allowed without planning approval in rural, industrial and special purpose zones"

wind turbines:

- 10-day complying development approvals could be granted for wind turbines mounted on the ground or a building or structure with a generating capacity of up to 10 kW in residential zones, and up to 60 kW in other zones
- If located near neighbouring dwellings, these turbines will need to meet strict operational noise limits
- All turbines mounted on a building or structure approved as complying development must not protrude more than three metres above the existing roof line
- Small-scale wind turbines less than 25 metres in height, located well-clear of neighbouring dwellings and meeting other guidelines would be allowed without any planning approval in rural areas.

🔗 www.planning.nsw.gov.au/LinkClick.aspx?fileticket=p5AzjkOy6P8%3D&tabid=212&language=en-AU

Tools & Resources



Home Energy Audit Toolkit
(Image courtesy Hobart City Council)

Home Energy Audit Toolkit

The Hobart City Council has developed a home energy audit toolkit to help Tasmanians understand the climate and environmental impacts of household energy use. The so-called HEAT kits can be borrowed from participating local councils free of charge, allowing users to audit their own homes at a time of convenience.

The program is intended to create behavioural change, foster responsible energy use, and help participants save both energy and money. The Southern Tasmania Council Authority's Regional Climate Change Initiative (RCCI) designed the energy auditing tool for easy use. Each HEAT contains:

Power-Mate – which enables measurement of electricity consumption of all electrical appliances with a standard 3-pin plug. These are useful for measuring the electricity consumption of appliances such as fridges; televisions, microwaves and computers and their standby consumption.

Infrared radiometer – used to check for leaks around fridge doors as well as checking for adequate ventilation behind the fridge/freezer and the effectiveness of ceiling insulation.

Stopwatch – assists in determining flow rate of hot water from showers and taps.

Compass – assists in identifying orientation for solar aspect considerations and the suitable orientation of roofs for maximising hot water and electricity solar panels.

Thermometer with magnet – enables measurement of air temperature around houses, hot water systems, fridges and freezers.

Supporting instruction and information sheets – these have been developed specifically for Tasmanian households and provide instructions on how to use the tools included in the kit, and suggest do-able energy efficient actions for various appliances and/or activities.

The HEAT initiative “gives people the ability to undertake their own home energy audits – so they can choose to make the changes that suit them and save them money”, says Hobart Lord Mayor Alderman Rob Valentine. “The toolkit is very practical and shows that there are lots of inexpensive things that you can do to save you energy and money – here and now – without having to go to the expense, time and effort of installing renewable energy technology or replacing hot water systems.”

🔗 www.hobartcity.com.au/content/InternetWebsite/Environment/Home_Energy_Audit_Toolkit_HEAT.aspx

Green Tag tool launched

Ecospecifier has launched a new certification system for building products related to carpet and flooring, furniture and walls, and partitions and ceilings. The Green Building Council of Australia will allow GreenTag rated products to achieve points under the Materials Categories in the Green Star environmental rating tools for buildings.

🔗 www.thefifthestate.com.au/archives/12233

Wiki launched for climate adaptation

A Department of Climate Change and Energy Efficiency supported Wiki has been launched to facilitate knowledge sharing on climate adaptation among built environment professionals. The Built Environment Climate Change Adaptation (BECCA) Wiki is effectively an adaptive online encyclopedia that allows contributors to upload and edit original content relevant to climate change impacts and adaptation options for the built environment.

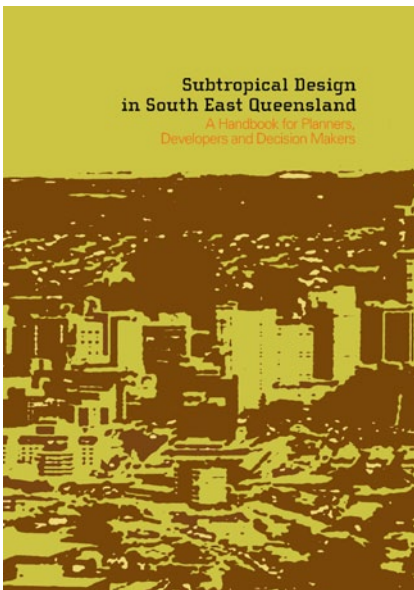
The pilot stage of the project focuses on the electrical and railway sectors but is set to cover more topics with contributions from professionals. According to BECCA, the Wiki will provide comprehensive information on the following three areas:

- supply impacts of climate change on a range of built environment assets, human resources and activities
- demand impacts of climate change for specific industry sectors
- adaptation options that can be used to mediate against or reduce the identified supply and demand impacts on built environment assets

Those wishing to contribute can register online at:

🔗 www.wiki.climatechangeadaptation.org.au/tiki-register.php

🔗 www.wiki.climatechangeadaptation.org.au



A new handbook for subtropical design

Subtropical Design in South East Queensland: a Handbook for Planners, Developers and Decision Makers

The Queensland University of Technology's Centre for Subtropical Design has published a handbook to share knowledge about design and planning of the subtropical built environment with planners, developers and decision-makers.

The richly illustrated publication provides a direct link between the subtropical design principles outlined in the Queensland Government's *The South East Queensland Regional Plan 2009–2031* (the Plan), and regional councils' implementation of the Plan's high-level policies, within local growth management strategies.

A comprehensive design guide explaining 'climate-sensitive' urban design approaches, the handbook is not intended to be a code, but instead is aimed at guiding planners and developers in the creation of attractive urban environments that are liveable, affordable, environmentally sustainable, and resilient to climate change. It offers indicative images and diagrams that show how subtropical design principles can be applied to the entire spectrum of urban scales from the regional scale, to the city, neighbourhood, street, individual building or site.

South East Queensland (SEQ) is the fastest-growing region in Australia. It is estimated that at least 754,000 new residences, and supporting infrastructure, will be required to accommodate population growth over the next twenty years. The SEQ Regional

Plan's objective is to manage this growth in a sustainable way. Compact urban settlement and transit-oriented development are key policies to head off low-density sprawl.

However, sustainability through urban consolidation brings unique challenges in the humid subtropical climate, such as the need for urban form which allows space for air movement and for significant vegetation around buildings to shade streets and public places.

A critical aspect of the SEQ Regional Plan's vision is its recognition of the effect of climate on liveable urban form. The Plan identifies twelve subtropical design principles to guide planning and urban design to protect the valued subtropical character of the region:

- Recognise sub-regions
- Respect topography
- Diversify the built environment
- Consider local character and design
- Integrate with nature
- Acknowledge informality
- Use vegetation
- Ensure diversity of open space
- Incorporate access to open space
- Design for water
- Develop outdoor centres
- Develop outdoor meeting places

Little further guidance regarding the value of subtropical design thinking is available in the Plan itself. The handbook expands the high-level principles into practical on-the-ground solutions and explains not only the principles and the interrelationships amongst them, but also how true subtropical urban development is responsive to local character and identity. The strategies which fall out of the principles provide the means to improve

urban structure, accounting for increased densities, balanced with open spaces, and urban vegetation and reduce dependency on resource-intensive buildings and neighbourhoods.

The handbook pays particular attention to accessible open space systems, and pedestrian connectivity and amenity, promoting the role that these features play in the quality and health of urban living, and taking into account the physical realities of walkability in heat and humidity, in what can often be in SEQ, hilly city topography. It also offers strategies to resolve the increasing conflict between the social role and the environmental role of urban open space.

The handbook makes it easier for people to envisage, and realise an alternative urbanism to the one dependent on the private motor vehicle and air-conditioned buildings, and provides the nexus between good policy and practical implementation,

The handbook written by EDG author Rosemary Kennedy is available for free download, or alternatively hard copies can be ordered through the Centre's website.

Subtropical Design in South East Queensland: A Handbook for Planners, Developers and Decision Makers

Author: Rosemary Kennedy
Price: \$ 38.50

The Centre for Subtropical Design is a partnership between Queensland University of Technology, Brisbane City Council and the Queensland Government Department of Infrastructure and Planning.

www.subtropicaldesign.org.au/index.php?option=com_content&task=view&id=38&Itemid=41



Local Training & Events

NABERS Assessor Course

National Australian Built Environment Rating System (NABERS) training courses for commercial building professionals will be run in capital cities throughout the country. See state and territory listings below for dates.

www.nabers.com.au/page.aspx?cid=649&site=2

ABSA courses in building thermal performance assessment

The Association of Building Sustainability Assessors (ABSA) has developed this course with support from the former Australian Greenhouse Office in consultation with national industry and government organisations. This qualification is required to be able to practice as an ABSA Accredited Assessor, using new 2nd generation assessment software such as First Rate 5, and to meet the requirements of the Nationwide House Energy Rating Scheme National

Register of Accredited Assessors. The 32 hour training program is delivered in three modules: Design and Construction Theory, Generation Software Operation (Accurate or FirstRate 5) and Professional Practice. These and other ABSA courses are run in capital cities. See state and territory listings below for dates. Please note that course scheduling may be subject to change. Refer to the website or call 1300 889 438 to confirm dates with ABSA's training department.

www.absa.net.au/training

ACT

16 August, ABSA: FirstRate 5, Canberra

Refer to ABSA course description at the top of this section for details of this seminar.

Northern Territory

5-6 June, The Top End Sustainable Living Festival, George Brown Darwin Botanical Gardens

Nursery and Garden Industry NT (NGINT) and Environment Centre NT (ECNT) have teamed up to present the inaugural Top

End Sustainable Living Festival. The festival which is themed "Our Environment, Your Backyard" will feature exhibits, displays, practical demonstrations and information sessions exploring sustainable living.

www.greenlivingfest.com.au

3 August, ABSA: AccuRate, Darwin

Refer to ABSA course description at the top of this section for details of this seminar.

Tasmania

1 July, ABSA: AccuRate, Campbell Town

Refer to ABSA course description at the top of this section for details of this seminar.

1 July, ABSA: FirstRate 5, Campbell Town

Refer to ABSA course description at the top of this section for details of this seminar.

23 June, Alternative Energy – Now and the Future, Hobart

The Green Building Council of Australia presents a breakfast event exploring the future of alternative energy technologies with James McGregor, Energy Systems Manager CSIRO. Case study examples of Green Star

projects that incorporate alternative energy technologies will be presented. The venue is to be confirmed. Tickets can be booked through the GBCA.

www.gbca.org.au/events.asp?eventid=1212&source=events-listing

South Australia

25-28 May, ASBA Building Thermal Performance Assessment FirstRate 5, Adelaide

Refer to the top of this section for details of this seminar.

3 June, GBCA Adelaide Member Evening, Bar Cuba, Adelaide

The inaugural networking event for GBCA's Adelaide members. Book online:

www.gbca.org.au/events.asp?eventid=1158&source=events-listing

19, July, ABSA: FirstRate 5, Adelaide

Refer to ABSA course description at the top of this section for details of this seminar.

19, July, ABSA: AccuRate, Adelaide

Refer to ABSA course description at the top of this section for details of this seminar.

31 October - 4 November, SA Planning Conference, Adelaide Convention Centre

The Planning Institute of Australia's South Australian conference includes the Eastern Regional Organisation of Planning and Human Settlements (EAROPH) Golden Jubilee Congress.

www.planning.org.au/index.php?option=com_content&task=view&id=129&Itemid=111

West Australia

20-21 & 27-29 May, ASBA Building Thermal Performance Assessment FirstRate 5, Perth.

Refer to the top of this section for details of this seminar.

12 July, ABSA: FirstRate 5, Perth.

Refer to ABSA course description at the top of this section for details of this seminar.

26 July, ABSA: AccuRate, Perth.

Refer to ABSA course description at the top of this section for details of this seminar.

29 June, Workplaces of the future, location TBA, Perth.

This morning session will examine how sustainability is reshaping our vision of our future workplaces, and how green building can deliver environmental, economic, health and productivity benefits.

www.gbca.org.au/events.asp?eventid=1337&source=events-listing

18 August, GCBA Perth Member Evening, The Greenhouse, Perth.

Perth's GBCA members are invited to sustainability-focused restaurant The Greenhouse for a networking event. Book online:

www.gbca.org.au/events.asp?eventid=1315&source=events-listing

9-10 September, PCA's West Australian Planning Conference.

The Planning Institute of Australia's Conference for Western Australia. Venue to be announced.

www.planning.org.au/index.php?option=com_content&task=view&id=129&Itemid=111

Queensland

4 June, World Environment Day Breakfast, Sofitel Hotel, Brisbane CBD.

The Property Council of Australia presents Prof. the Hon Robert Hill, who has recently returned to Australia to take up the role of chairman of the Australian Carbon Trust. The Australian Government has recently committed \$75.8 million over five years to fund the Trust. The bulk of that money will be spent on promoting energy efficiency in the business sector, and provides a unique opportunity for Australia's property

and construction sector to showcase and mainstream energy efficiency innovations.

www.propertyoz.com.au/qld/Article/EventDetail.aspx?p=31&id=1558

10 June, GBCA Members Event, Adelaide St, Brisbane CBD.

The GBCA invites its members to an informal networking event.

www.gbca.org.au/events.asp?eventid=1080&source=events-listing

10-12 November, Queensland Planning Conference, Hyatt, Coolom.

The Planning Institute of Australia's Queensland state conference will include the Planning for Excellence Awards dinner.

www.planning.org.au/index.php?option=com_content&task=view&id=129&Itemid=111

Victoria

25 May, Council House 2 Site Tour, Little Collins St, Melbourne.

Melbourne City Council's CH2 is a 6 Star Green Star - Office Design v2 and a 6 Star Green Star - Office as Built v2 building project in heart of Melbourne's CBD.

🔗 www.gbca.org.au/events.asp?eventid=1336&source=events-listing

25-26 May, The 3rd Victorian Sustainable Development Conference, Federation Square, Melbourne.

The third annual Victorian Sustainable Development Conference brings together decision makers from the public, private and non-government sectors to discuss the key issues surrounding sustainability in Victoria.

🔗 www.halledit.com.au/vsd2010

27 May, Future Directions: Melbourne @ 5 Million, Citiclub, Queen St, Melbourne.

Melbourne's population will pass original population projections before 2020 and is likely to reach five million before 2030. Dominic Arcaro from VicUrban and Julian Hill from the Department of Planning and Community Development will discuss the implementation of Central Activities Districts and how they are being managed to better shape where we work, live and play.

🔗 www.propertyoz.com.au/qld/Article/EventDetail.aspx?p=31&id=1669

17 June, ABSA: FirstRate 5, Melbourne.

Refer to ABSA course description at the top of this section for details of this seminar.

23 August, ABSA: FirstRate 5, Melbourne.

Refer to ABSA course description at the top of this section for details of this seminar.

15-17 September, PCA's Victorian Planning Conference.

The Planning Institute of Australia's Conference for Victoria. Venue to be announced.

🔗 www.planning.org.au/index.php?option=com_content&task=view&id=129&Itemid=111

New South Wales

25 May, Good green design to achieve green performance, Castlereagh St, Sydney.

Good green design to achieve green performance - Driving sustainability through tenancy fit-outs is a CitySwitch Event. This breakfast will outline how and when tenants should take action, the benefits of obtaining a Green Star – Office Interiors rating as well as how this can influence energy efficiency, and identify opportunities for both tenants and building owners; and will be followed by an optional site tour.

🔗 www.gbca.org.au/events.asp?eventid=1324&source=events-listing

3 June, Green Procurement Training, Sydney.

The Chartered Institute of Purchasing and Supply offers a training course for building analysis skills for sustainable procurement. Attendees will learn how to assess an organisation's 'spend profile' and identify sustainability risks and opportunities.

🔗 www.cips.org/australasia/training/open/spm

6 July, ABSA: FirstRate 5, Sydney.

Refer to ABSA course description at the top of this section for details of this seminar.

6 July, ABSA: AccuRate, Sydney.

Refer to ABSA course description at the top of this section for details of this seminar.

May 2010

May 26, Sustainable Property Conference: Repositioning Our Cities, Melbourne Convention & Exhibition Centre.

The Property Council of Australia's third Sustainable Property Conference will focus on the ways in which the property industry can respond to the threats and opportunities of climate change.

www.propertyoz.com.au/vic

May 26-28, New Zealand Sustainable Building Conference, The Museum of New Zealand, Te Papa, Wellington.

The follow up to the successful sustainable building conference held in Auckland in 2007, the 2010 New Zealand Sustainable Building Conference (SB10 NZ) will showcase national and international speakers. The event will explore the full range of topics related to the sustainable built environment: policy and planning, retrofitting and maintenance, and design and construction.

www.sb10.co.nz

June 2010

15-16 June, Built Environment Meets Parliament, Canberra.

Built Environment Meets Parliament (BEMP) is an annual conversation between parliamentarians and industry leaders that showcases the relationship between Australian communities and their built environment. BEMP 2010 will explore how Australia's capital city metro strategies measure up to the Prime Minister's nine performance criteria. Jennifer Westacott of KPMG will release the results of a ground-breaking capital city audit commissioned by BEMP.

15 June, Australia Award for Urban Design presentation and dinner, National Portrait Gallery, Canberra

16 June, BEMP Summit, Parliament House, Canberra

29 June - 1 July, Climate Adaptation Futures, Gold Coast Convention Centre.

Co-hosted by Australia's National Climate Change Adaptation Research Facility and the CSIRO Climate Adaptation Flagship, this conference will be one of the first international forums exploring climate impacts and adaptation. The event brings together scientists and decision makers from both developed and developing countries to share research approaches, methods and results.

www.nccarf.edu.au/conference2010

July 2010

12-13 July, 2010 Healthy Cities Conference, Stamford Plaza, Brisbane.

The 2010 Healthy Cities Conference is a platform for government and industry professionals to discuss the issues relating to sustainability, population health, economic development, natural resource management, transport, climate change and urban design. The 2010 conference will be held over two days, with optional site tours conducted on July 14. Register online here.

www.healthycities.com.au

August 2010

30 August - 1 September, 3rd International Urban Design Conference, National Convention Centre, Canberra.

The 2010 International Urban Design Conference will explore the ways in which new cities are designed and existing ones are adapted to meet changing demands of urban living in the 21st Century. The conference will bring together policymakers and design practitioners, and feature keynote presentations, tours, workshops and networking events.

www.urbandesignaustralia.com.au

30 August - 1 September, 63 United Nations Dept. of Public Information/ Non-Governmental Organisation Conference, Melbourne.

The focus of this event is global health as it relates to the Millennium Development Goals (MDG). According to the United Nations the MDGs are the internationally

accepted road map for poverty reduction and development.

www.un.org/News/Press/docs/2010/ngo692.doc.htm

September 2010

5-8 September, EcoGen 2010, Sydney Convention and Exhibition Centre.

EcoGen 2010 will bring together the highest levels of the global clean energy industry to tackle the issues facing the industry. The conference will feature presentations from clean energy leaders, and exhibits showcasing the latest in clean energy technology.

www.ecogen2010.com.au

12 September, Sustainable House Day 2010, locations nationally.

On September 12, hundreds of sustainable homes around Australia will open their doors to the public for free for Sustainable House Day. The national event showcases sustainable houses, providing people with the opportunity to learn about and explore real examples of sustainable design. Architects and builders will be present at many of the homes to explain design principles and provide tips.

www.sustainablehouseday.com

15-16 September, World Green Roof Congress, London, UK.

The 2010 World Green Roof Congress (WGRC) brings together international green roof experts. The event provides a platform for those involved in the green roof industry to share best practice examples, and develop ways to drive the uptake of this environmental infrastructure.

www.worldgreenroofcongress.com

20-22 September, Green Building Council of South Africa Convention & Exhibition, Cape Town International Conference Centre.

This event features two full days of Green Building presentations and panel discussions from leading local and international green building experts. The convention is accompanied by an exhibition of sustainable building products, technologies and services.

🌐 www.gbcsa-convention.org.za

22-24 September, SB10: Sustainable Community Conference – buildingSMART, Espoo, Finland

The Finnish Association of Civil Engineers presents the 2010 international sustainable community conference.

🌐 www.sb10.fi

26-30 September, Environmental Educators Conference: Leading Change, Living for One Planet, Canberra.

Australian Association for Environmental Education's 16th Biennial Conference creates a dialogue for leadership at the interface of the disciplines of Health, Education and Environment. The 2010 conference will feature notable speakers including Carmen Lawrence, Tim Flannery, Clive Hamilton and Greg Bourne (CEO WWF).

🌐 www.conferenceco.com.au/aaee

October 2010

6-7 October, All-Energy Australia 2010, Melbourne Exhibition & Convention Centre.

The All-Energy Australia conference and exhibition is the Asia-Pacific region's leading clean energy event. The event will feature presentations and exhibits showcasing a broad range of energy efficiency and clean energy technologies. Admission is free of charge to those with a professional interest in clean energy.

🌐 www.all-energy.com.au/About_All-Energy.html

🌐 www.livablecities.org/conferences/forthcoming-conferences/18.html

12-15 October, The International Cities, Towns & Communities Society (ICTC) 2010 Conference & Exhibition, Opal Cove Convention Centre, Coffs Harbour.

🌐 www.ictcsociety.org/Events/2010_Conference.aspx

17-21 October, 48th International Making Cities Liveable, Charleston, South Carolina, USA.

The 2010 International Making Cities Liveable conference will focus

on urban planning for healthy and child-friendly communities. The conference will bring together design practitioners from around the world to develop tools for encouraging the sustainable development of cities.

🌐 www.livablecities.org/conferences/forthcoming-conferences/18.html

20-23 October, Green Roofs Conference 2010, Adelaide Zoo.

The annual conference of Australia's green roofs and walls peak body will focus on driving the increase in green roof and wall installation, and discuss ways to demonstrate their technological and environmental benefits. Check out the following website for more details.

🌐 www.icebergevents.com/greenroofsconference2010

November 2010

23-26 November, ANZSES Solar 2010 Conference, Canberra.

The national solar energy society's annual conference. Details will be available soon.

🌐 www.anzsos.org

30 November, Bait VeNoy - Israel Green Building Council Conference, Avenue Convention Center, Tel Aviv.

Bait VeNoy and the Israel Green Building Council will host the 2010 green building conference with a focus on technologies, methods and applications. The conference is aimed at professionals in architecture, interior design, project management, acquisitions and logistics, industrial and building contracting. The convention will include an exhibition of cutting-edge projects and technologies from around the globe.

🌐 www.worldgbc.org/files/Bait%20VeNoy%20Conf%20Eng.pdf

1-3 November, Skyrise Greenery Conference, Singapore.

This conference will present the latest developments in green roofs and vertical landscaping practice. It provides a forum for international urban greenery experts from academia, architecture, landscape architecture, policy-makers and stakeholders to collaborate and discuss the emerging field.

🌐 www.skyrisegreenery.com

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