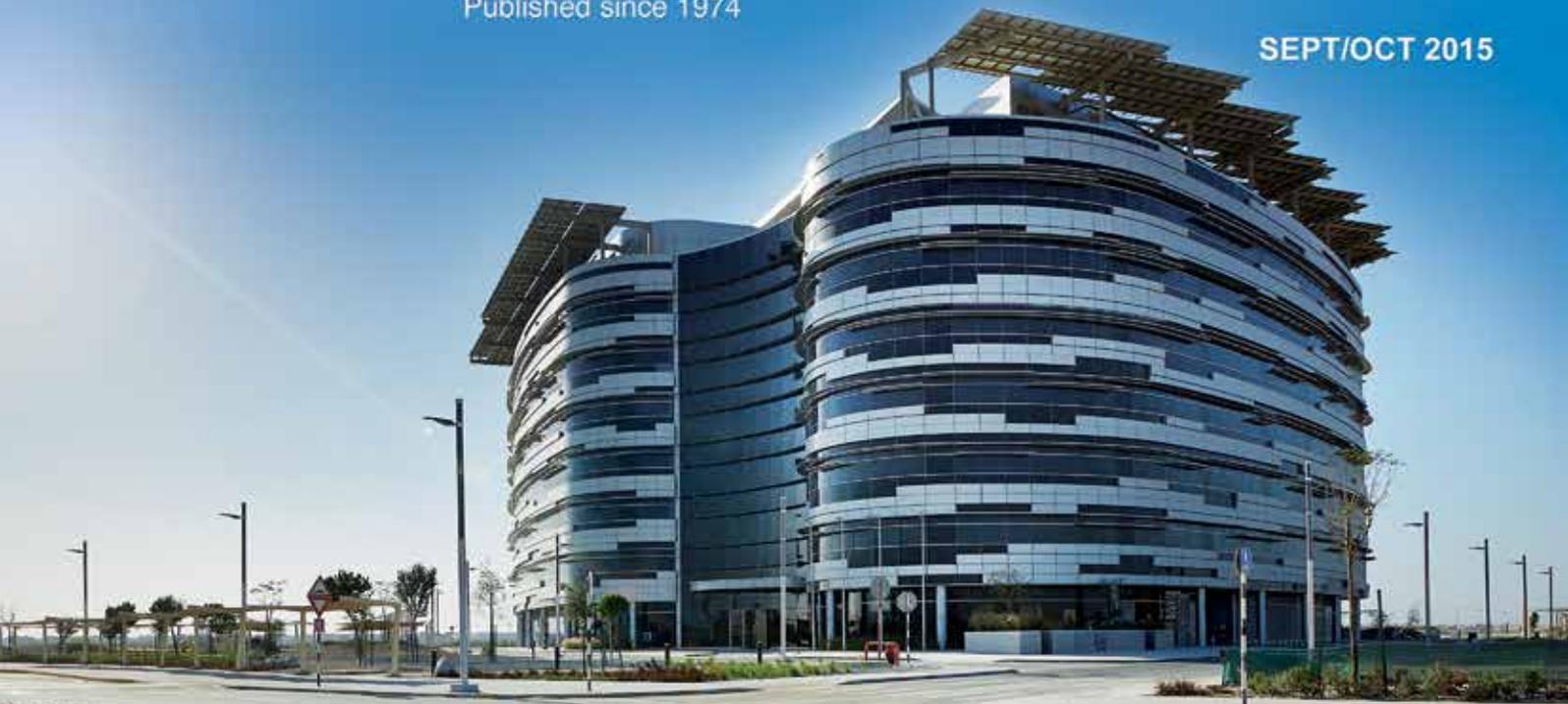


SOUTHEAST ASIA

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INCORPORATING ARCHITECTURE, INTERIOR DESIGN AND LANDSCAPING
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IRENA Headquarters

Abu Dhabi, UAE



Annual Green Issue

INTERVIEWS



Terri Wills, Chief Executive Officer, World Green Building Council



Mr Chia Ngiang Hong, President, Singapore Green Building Council



Melissa Merryweather, Chair, Vietnam Green Building Council; Director, Green Consult-Asia & Vietnam Representative, Green Cities Fund



Sanwar A. Sunny, Founder & Executive Director, Bangladesh Green Building Council



Romilly Madew, Chief Executive Officer, Green Building Council of Australia



Tony Lee Luen Len, Founding Chairperson, Green Building Council of Mauritius



Alex Cutler, Chief Executive, New Zealand Green Building Council



Christopher C. de la Cruz, Chief Executive Officer, Philippine Green Building Council

PLUS Sustainable building projects; Interior design of shopping malls; Playground equipment (Wet) projects; Fire safety management; Show preview of Myanmar Build & Decor 2015 & Green building products showcase



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On the Cover: IRENA Headquarters in Masdar City, Abu Dhabi, UAE
Photo: © International Renewable Energy Agency (IRENA)

Cover design by Fawzeeah Yamin



more than 100 solar panels help to provide power and heat water in each station. Energy-efficient LED lighting in car parks, forecourts, uncovered patron areas, and many internal areas, improve safety. Sensors automatically switch off or reduce the use of lighting and air-conditioning systems when they are not required. Each train station uses energy and water meters to monitor consumption. Water-efficient taps, urinals and toilets reduce the reliance on potable water, while a rainwater harvesting system collects rainwater run-off from the roof which is used to flush station toilets and wash platforms. Low water-use and native plant species have been planted in the garden beds around the station.

The results are impressive. For example, West Footscray railway station produces 40 percent less greenhouse gas emissions than a standard station design, uses 60 percent less water and, in the middle of summer, its maximum electrical demand is 30 percent lower.

Q: What are the major drivers and barriers to green building design in Australia?

> There are a few key drivers, particularly in the commercial sector. Certainly, the evidence is clear that green buildings deliver consistently higher returns on investment compared their non-green counterparts. The latest Property Council/IPD Australian Green Property Index has found that Green Star-rated CBD office assets delivered a total annualised return of 10 percent, outperforming the CBD office market by 100 basis points.

Green Star buildings also have a competitive edge and can help to attract prospective tenants. Colliers International's Office Tenant Survey has found that 95 percent of Australian tenants want to be in a green building, up from 75 percent two years earlier. 'Green space' is one of the top four attributes tenants look for – along with bike racks, childcare facilities and a gym.

Of course, the environmental benefits are also a driver. Our Value of Green Star: report from 2013 found that, on average, Green Star-certified buildings use 66 percent less electricity than average Australian buildings, produce 62 percent fewer greenhouse gas emissions and use 51 percent less potable water.

While the business case for green building in the commercial arena is firmly established, our challenge is to translate that to the residential market. While location and price remain the biggest considerations for anyone purchasing a new home, smart buyers are starting to look at green ratings to decide whether a home will be a sustainable long-term investment.

Q: In what ways is the local government promoting 'green' design, construction and development in Australia?

> We have a three point advocacy plan to encourage governments around Australia (at the federal, state and local levels) to certify new and existing buildings using Green Star, encourage industry to move beyond standard practice and create better communities.

We are finding that many local governments are leading by example – and have the bricks-and-mortar demonstrations to prove it.

Wollongong City Council in New South Wales, for example, achieved Australia's first 5 Star Green Star – Performance rating

for an existing building. The rating provides the people of Wollongong with independent verification that their building stacks up against some of the newest green icons around the country – and that they have an efficient, productive and healthy community asset.

Similarly, the City of Gosnells' in Perth recently attained Australia's first 6 Star Green Star – Public Building Design v1 rating. The Mills Park facility features a new community hall and function centre for 300, commercial kitchen and café, meeting rooms and activity spaces, an indoor play space for children's parties, a clubroom and changing rooms for sporting groups, as well as office space for staff. Incorporating a range of outdoor recreation areas, the facility will connect local residents, protect the environment and engage the community for decades to come.

In Australia, we are increasingly seeing local governments influencing building decisions made in their communities. Leading councils recognise they have a responsibility to invest in assets that meet the needs of their communities not just today, but for decades to come, and they are turning to the Green Star rating system to help them.

Q: What will be the focus of the green building industry in Australia over the next three years?

> Australians are demanding more transparency and accountability – and companies are responding accordingly. The leaders in the property industry are now rating their buildings – and indeed their entire portfolios – as a matter of course.

For example, the 2014 Global Real Estate Sustainability Benchmark (GRESB) analysed data from 637 listed property companies and private equity real estate funds, covering 56,000 buildings with an aggregate value of USD \$2.1 trillion, finding "green building certification programmes have become institutionalised in the real estate market, with over 34,000 commercial buildings certified across the globe." GRESB recognises Australia as the "green leader" across all markets.

Green bonds are also encouraging investors to consider potential assets on the basis of their long-term sustainable returns. When Stockland, one of Australia's largest property developers, launched a €300 million green bond in 2014, the market took notice. The proceeds of this green bond will be invested in green building projects that achieve a minimum 4 Star Green Star rating.

As I mentioned earlier, the leaders in the industry – namely Lendlease, Australand and Stockland – are achieving Green Star ratings for their entire portfolios.

Increasingly, both small and large companies have moved beyond regulation, and are reacting to the signals set by the market leaders. If you want to do business with the leaders, then you must comply with the sustainability measurements they have in place.

Take Lendlease's work on supply chain engagement, for example. Lendlease's T2 office development at Barangaroo South, which achieved a 6 Star Green Star rating representing 'world leadership' in sustainable design, was awarded Green Star 'Innovation' points for a framework that will change the way the entire supply chain operates. This framework will influence what producers make, how they make it, who they sell to and how they market. In this context, sustainability is a risk management tool that ensures companies don't get cut out of the market.



Interview with Tony Lee Luen Len **Founding Chairperson, Green Building Council of Mauritius**

Q: What is the current status of green buildings in Mauritius?

> There has been a major improvement in the awareness regarding Green buildings. There is only one certified green building, but there are several buildings that can be qualified as green buildings. However the market has a long way to go, specially to make green buildings close to a standard, like in some countries.

Q: What types of projects are leading the way in green building and construction?

> We would have liked to say that public sector projects are leading the way. It is not the case. However, Government initiatives have been a helpful.

The first project is all the work on energy efficiency and energy conservation in buildings. Unfortunately the building codes prepared in 2011 are currently being reviewed again and have not been promulgated. However, during the consultancy work, and with the awareness campaigns, we can see a change in the market. Buildings are designed more efficiently in respect of energy.

The second event, is the announcement in the last budget for a Smart City Scheme, whereby projects will have fiscal and non-fiscal incentives to develop projects. The regulations are due to come out in the coming weeks. The Smart City Scheme will definitely give the needed impetus to green building and construction. Prior to the announcement, it is worth noting that there are developers who have already engaged in developing sustainably. The first registered BREEAM Communities project in the southern hemisphere is in Mauritius.

As to the types of projects, there are no specific project type that distinguishes itself from the others.

Q: What are the major drivers and barriers to green building design in Mauritius?

> The major driver in Mauritius is mainly corporate policy. Some companies have objectives that do not allow them to do any other way than to design sustainably. There is also the coming sustainability index on the Mauritius Stock Exchange. Some companies are already doing the Global Reporting Initiative (GRI) reporting. Similarly there are individuals that are ecologically conscious and want their project to be green.

Market differentiation comes second. Some projects are designed with green elements to provide the developer with a competitive advantage.

One other driver that is on the rise, is market pressure. For hotels, there is a fear that clients will start preferring green hotels. For industry, clients are requesting that the suppliers prove their green credentials.

The main barrier is the human nature of resisting change. Often, the issue is that the team shall rather stick doing things the same way, the design they know, the process they know. This is the reason why several projects registered to be certified, drop out before the projects are built. This is linked to the lack of knowledge. Generally there is a lack of knowledge what green buildings are, but more often the problem is the lack of knowledge of the various construction details or technologies. An example is one will not specify a green roof, because they do not know how it works and what type of issues they can be plagued with in future. Green building professionals are also not numerous.

Another barrier is the availability of products and technologies, and more importantly their costs. With the green building market being in its infancy and because of the other barriers, there is a lack of demand for such products and technologies. On the flipside, this has caused designers to think first on the low-tech opportunities, which is a good thing.

The cost barrier is exacerbated because the standard of construction is low in Mauritius. The market has been requesting incentives to reduce the first costs. To date the public sector has not had any policies in place to incentivise green building design. Hopefully the Smart City Scheme shall respond to this market need.

Q: In what ways is the local government promoting 'green' design, construction and development in Mauritius?

> It cannot be said that the Government has been actively promoting 'green' design, construction and development in Mauritius. There has been the energy efficiency and energy conservation programme, which to date has not been successfully complemented. The Smart City Scheme is the first real initiative and opportunity. It should be noted that the Government has developed a green building rating tool (Brilliant Pearl) a few years ago, and the appointed



consultants had proposed a strategy and an action plan. However these have not been implemented.

Q: What will be the focus of the green building industry in Mauritius over the next three years?

> The focus of the green building industry over the next three years will invariably be around the Smart City Scheme. Although the scheme is specific to neighbourhood/city-scale development, the requirements and the incentives

will promote green building design. We shall see better availability of products and technologies. The professionals will be forced to step up to the market demand. Operations will be an important component. The energy efficiency and energy conservation building code shall hopefully be implemented in 2016 at the same time as the energy audit schemes etc. The focus will be first and foremost on energy efficient buildings. We are expecting to see more certified green projects.

Interview with Alex Cutler

Chief Executive, New Zealand Green Building Council



Q: What is the current status of green buildings in New Zealand?

> In New Zealand's commercial sector, green building is increasingly moving into the mainstream. Now it's less likely to be perceived as something achievable only for prestigious corporate addresses. Awareness is also growing that green principles don't necessarily add cost when approached in an integrated way at the project's outset. This has been slow to percolate to all layers of the profession, however, so New Zealand does lag behind other OECD countries in terms of uptake.

We have a number of rating tools available for people to use to design and construct more sustainable buildings. Green Star is the most commonly used tool in the non-residential market and Homestar covers the residential market.

Q: What types of projects are leading the way in green building and construction?

> We have some iconic projects that hold their own on the world stage. The Geyser Building in Parnell, Auckland was New Zealand's first 6 Green Star building (denoting world leadership) – this office features a naturally ventilated double-skin façade. The Christchurch Civic Building (Te Hononga) was the first to attain a 6 Green Star rating at Design, Built and Interior stages: this upgrade of an old New Zealand Post building features a world-leading trigeneration system.

Last year, Te Mirumiru in Kawakawa, our first commercial earth-bank building and first 6 Green Star Education building, won the World GBC's Asia/Pacific

award for sustainable design (among other awards). This unique childcare centre embodies social and environmental sustainability; the building is integrated into the landscape and pays homage to the tribe's customs and history, and its innovative insulation and waterproofing mean the centre stores heat when needed and remains cool in hotter weather. Many new schools are being built sustainably, and the government provides extra capital funding for schools to achieve this.

Of course, Green Star isn't the only game in town – the Tuhoe tribe's Te Uru Taumatua was New Zealand's first building designed to the Living Building Challenge, and is a remarkable example of sustainable construction in Te Urewera National Park.

Homestar is NZGBC's tool for residential properties, and this year we've seen developers achieve top-tier Homestar ratings (on the 1-10 scale). In May, a Papamoa home achieved New Zealand's first 10 Homestar Design rating, and is aiming to also achieve a 10 Homestar Built rating; among its many features are a photovoltaic energy system and solar hot water, a state-of-the-art system that controls when appliances switch on, and a smart piping system that captures passive heat to warm the home. In August, a house in Christchurch's Church Square achieved New Zealand's first 10 Homestar Built rating thanks to a high-performance thermal envelope, a solar wall ventilation system, and innovative hydronic underfloor heating.

The Zero Energy House is another notable project. An Auckland-based engineering couple designed and built their own zero-energy sustainable home, and freely share their processes, costs and experiences at www.zeroenergyhouse.co.nz.