

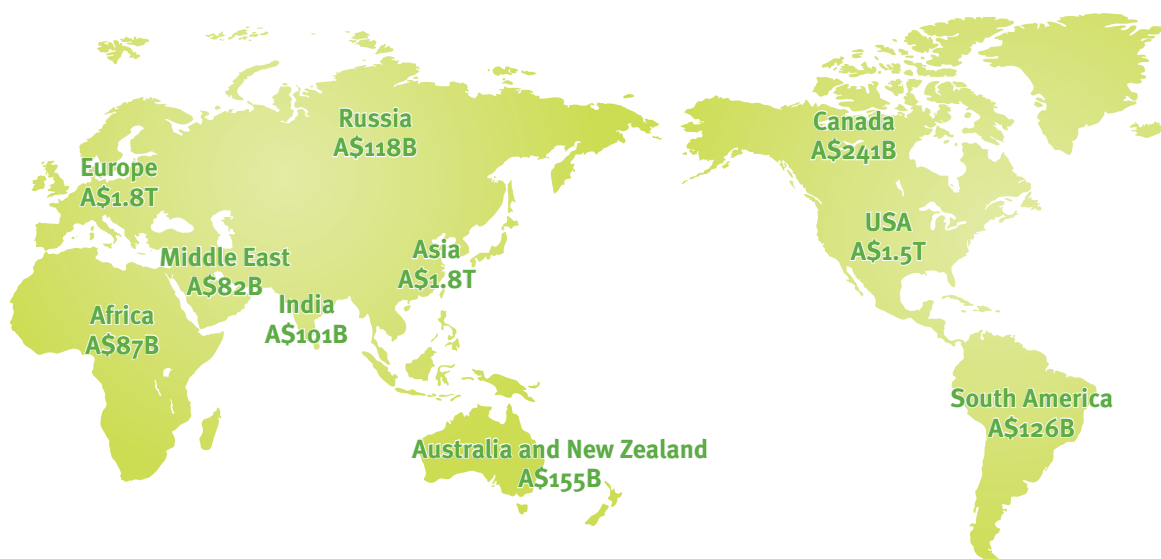
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Queensland clean technologies exports

Green building opportunities: global demand

Global trends – green building

- There are significant and growing opportunities for more Queensland exporters to get into green markets and provide environmental solutions, such as green building services and products.¹
- The global construction industry is valued at A\$5.8 trillion annually. It is facing unprecedented and growing pressures, originating from the lack of available resources, rising material costs and climate change. These trends have helped trigger the widespread adoption of green building design and construction methods.
- International research indicates that green building is being adopted at dramatic rates in every region of the world. The major markets for green building include China, India, the USA, Europe, and the Gulf States.
- Asia is the fastest-growing regional construction market. Early green building market adopters, particularly in China and India, could stand to gain significant market advantage in the construction industry.
- The World Bank estimates that by 2015, half of the world's building construction will take place in China. A priority for the Chinese Government is to encourage green building and reduce building-related energy consumption. China is investing hundreds of billions of dollars in energy efficiency projects, infrastructure construction and people's livelihood improvement – a significant portion of which will be used in green building development.²
- India has also emerged recently as one of the world's fastest-growing markets for green buildings. National shortages of water and power are driving India's focus on green building. The Indian Green Building Council estimates that the market for green building materials and equipment in India will exceed A\$50B by 2012.³
- The USA is the largest single-country construction market in the world, with an annual value of A\$1.5 trillion. According to a recent report by McGraw Hill Construction, by 2013 more than half of all building firms operating in North America (including Canada and Mexico) will be largely or fully dedicated to green building projects. The US Government has released a range of Economic Stimulus packages relating to green building in the US. Green building construction in the US is projected to increase to A\$60B by 2010.⁴
- With output over A\$1.8 trillion annually, Europe is also one of the top regional construction markets. Europe is a consistently stable economy with strong prospects for fostering a growing green building marketplace.

Global construction output (2007) Total: A\$5.8T⁷

Opportunities for Queensland exporters

- These global trends suggest significant and growing market opportunities for export of Queensland green building services and products. The green building sector has a large concentration of existing and potential Queensland clean technologies exporters.⁵
- Trade Queensland has identified opportunities in several markets for Queensland green building services exporters, including (but not limited to):
 - › architectural and engineering services for high-rise structures (India, Singapore and the Gulf States), theme parks (India) and hotels (India and the Gulf States)
 - › niche architectural services (China, India, USA and Singapore)
 - › specialised green building consultancies (the Gulf States)
 - › urban planning and design (China, India and Singapore), and
 - › engineering and/or energy efficiency consultancies (China, India, USA, Singapore and the Gulf States).⁶
- Trade Queensland has also identified significant demand in several markets for Queensland green building materials and equipment, including (but not limited to):
 - › high-efficiency heating, ventilation and air conditioning (HVAC) systems (China, India, USA and Singapore)
 - › air conditioning equipment (the Gulf States)
 - › low-emission window and day lighting technologies (China, India, USA and Singapore)
 - › affordable green building materials, with consideration for life cycle perspective of building cost (various markets)
 - › recyclable and bio-degradable materials and self-cleaning external facades (various markets)
 - › water saving and efficiency and storage systems (China, India, USA, Singapore and the Gulf States)
 - › intelligent building monitoring and management systems and facility / building management (USA, Singapore, the Gulf States and India) and fire and safety systems (India)
 - › energy saving insulation products for floors, walls and ceilings (various markets)
 - › indoor environment quality systems and technology, such as the low-VOC (volatile organic compound) and environmentally friendly interior paints and finishes that improve the overall indoor air quality of the home (Singapore)
 - › customised energy saving solutions (various markets), and
 - › other environmentally friendly green building materials and equipment that help score points under the LEED and / or Green Mark green building rating systems (India, USA and Singapore).⁶
- Trade Queensland is also currently investigating potential opportunities for export of Queensland green building services and products to Europe, Africa and other regions.

Green building offers the opportunity to conserve energy and water, improve building operations and enhance the health and wellbeing of the global population. Further, green building represents a tremendous market opportunity, as it grows rapidly to represent an increasing share of the global [A\$5.8T] construction industry output each year.

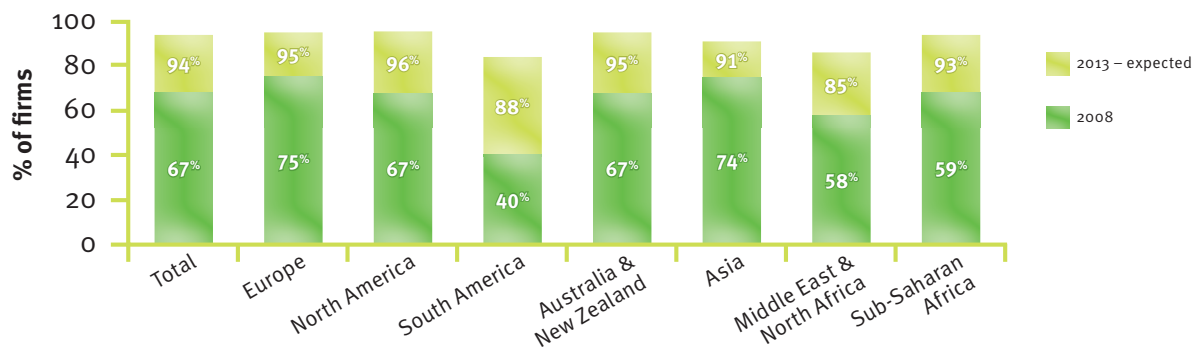
McGraw Hill Construction, 2008

Market challenges

- Market challenges vary considerably from country to country. It is important that Queensland green building firms that are considering exporting have a good understanding of the local market issues.
- For example, some markets, like the USA, can be highly competitive and market access can prove difficult. Queensland firms may need to consider partnering with local firms, using agents or distributors, or setting up representative offices or companies as part of their export strategy to a particular market.
- For example, it is also important that Queensland green building firms considering exporting:
 - › research the opportunities and potential competition in the particular export market
 - › determine the purchasing process for their product or service
 - › mitigate payment and foreign exchange risks
 - › consider intellectual property protection as part of their market entry strategy, and
 - › note that green building regulations and ratings systems can vary significantly from market to market. For example, China does not generally recognise international green building standards. Suppliers of building materials to China are required to meet both Chinese National and Regional building material standards. Importation of building materials generally involves some independent testing by Chinese authorities to determine compliance with relevant regulations.

PERCENTAGE OF FIRMS DEDICATED TO GREEN BUILDING ON AT LEAST 16% OF PROJECTS, BY REGION – 2008 AND EXPECTED 2013

Source: McGraw Hill Construction, 2008



Trade Queensland export services

The Queensland Government's export agency assists Queensland organisations to grow their technologies and services globally through its network of international representatives, its dedicated state-wide team of export advisors* and its market and industry specialists in Brisbane. This is complemented by targeted clean technologies trade missions and business matching assistance for Queensland exporters.

For more information

For more information about green building global market trends and opportunities for Queensland exporters, please contact Trade Strategy on +61 7 3224 4230 or tradestrategy@trade.qld.gov.au

Interested companies can also visit export.qld.gov.au

Coming soon

Series examining water and wastewater technologies and services export opportunities in key overseas markets.

Other issues in the series

- Issue 1 – Green building opportunities: USA
- Issue 2 – Green building opportunities: China
- Issue 3 – Green building opportunities: Gulf States
- Issue 4 – Green building opportunities: India
- Issue 5 – Green building opportunities: Singapore

Did you know?

Buildings are responsible for about:

- 40 per cent of global primary energy use, greenhouse gas emissions and waste generation
- 32 per cent of the world's resources in construction, and
- the consumption of about 12 per cent of global water.

Source: Intergovernmental Panel on Climate Change, World Meteorological Organisation, 2007.

Selected references

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Energy Efficiency Retrofits for Commercial and Public Buildings, Pike Research, 2009.

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Green Gold Rush: How Ambitious Environmental Policy Can Make Australia a Leader in the Global Race for Green Jobs, Australian Conservation Council and the ACTU, October 2008.

Preparing for China's Urban Billion, McKinsey Global Institute, March 2009.

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Queensland Clean Technologies Exports: Vol. 1 (Green Building), Issue 2 (China), Trade Queensland, Spring 2009.

Queensland Clean Technologies Exports: Vol. 1 (Green Building), Issue 3 (Gulf States), Trade Queensland, Spring 2009.

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Queensland Clean Technologies Exports: Vol. 1 (Green Building), Issue 5 (Singapore), Trade Queensland, Spring 2009.

Regional Export Opportunities for Australia's Clean Energy Industry, Renewable Energy and Energy Efficiency Partnership (REEEP) and the Clean Energy Council, Australia, the Australian Trade Commission, June 2008.

¹ "Green building" includes (but not limited to): green design and sustainable urban design and engineering consultancies; energy, insulation, air-conditioning and water efficiency equipment and products; building monitoring and management systems; facility/building management; and other environmentally friendly building products and services that help score points under the various "green building" rating schemes (e.g. retro-fitting existing buildings).

² For more information, see *Queensland Clean Technologies Exports: Vol. 1 (Green Building), Issue 2 (China)*, Trade Queensland, Spring 2009.

³ For more information, see *Queensland Clean Technologies Exports: Vol. 1 (Green Building), Issue 4 (India)*, Trade Queensland, Spring 2009.

⁴ For more information, see *Queensland Clean Technologies Exports: Vol. 1 (Green Building), Issue 1 (USA)*, Trade Queensland, Spring 2009.

⁵ Queensland's water and wastewater technologies and services sector also has a sizeable concentration of existing and potential Queensland clean technologies exporters.

⁶ For more information, please see *Queensland Clean Technologies Exports: Vol. 1 (Green Building), Issues 1 to 5*, Trade Queensland, Spring 2009.

⁷ Source: University of Reading (Roger Flanagan and Carol Jewel) data; Asia Construct, EuroConstruct, and national statistics David Langdon & Seah International World Construction 2007-08. Based on A\$1 = US\$0.80.

International activities and events

Trade Queensland will host the following green building trade missions and events in 2009–10.

January 2010

Climate change, water and clean technology events as part of G'Day USA | San Diego and Los Angeles

March 2010

Trade mission to Los Angeles, Washington State and British Columbia, including participation in GLOBE 2010

June 2010

Green building trade mission | China

September 2010

Trade mission to participate in the Indian Green Building Congress | New Delhi

October 2010

Green Hub Korea | Seoul

November 2010

Green building trade mission to United Arab Emirates, including participation in BIG 5 | UAE

Note: Trade missions are subject to sufficient commercial interest and market conditions. Please check the event calendar on our website for the most up-to-date trade mission information.

Australian activities and events

November 2009

Queensland Climate Change Summit | Brisbane

March 2010

OzWater | Brisbane

March 2010

Trade Queensland clean tech seminars | Gold Coast and Sunshine Coast (TBC)

May 2010

DesignBUILD | Melbourne

September 2010

River Symposium | Brisbane

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