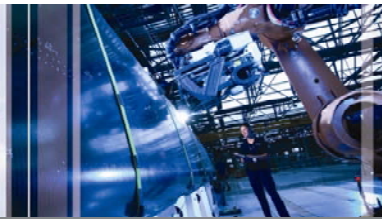




News from the Boeing world



September 2009

Boeing Australia & South Pacific



## Boeing aggressively pursues environmental targets here and around the world

Much of the world's environmental focus in the aviation industry has been on commercial airplanes, but at The Boeing Company, green measures go much deeper and extend into all parts of the company's business including around Australia. As Jim McNerney, Boeing chairman, president and CEO puts it, the pace of progress of the company's environmental initiatives this year has accelerated even in the face of a global economic slowdown.

It is true Boeing Commercial Airplanes has taken a leadership role with a three-pronged attack, recommending and implementing changes to aircraft design, air traffic management and the use of advanced biofuels, the development and testing of which the company is greatly involved in around the globe.

Across the company, Boeing is continuing to improve the environmental performance of its products and targets improving the fuel efficiency of each new generation of commercial aircraft by at least 15 per cent compared to the aircraft it replaces, but also has key measures in place to reduce energy consumption, carbon dioxide emissions and hazardous waste at its facilities and efforts to pioneer environmentally progressive technologies.




Indeed The Boeing Company's [2009 Environment Report](#) highlighted a number of key achievements as the company pursues five-year targets of 25 per cent improvements in recycling rates, energy efficiency and greenhouse gas emissions intensity by 2012, with a similar goal for hazardous waste reduction.

So far the annual targets are already being achieved or exceeded, with Boeing outperforming its 2008 plan for hazardous waste reduction, greenhouse gas emissions and energy efficiency. It also increased its recycling rates from about 58 per cent to 64 per cent.

During 2008 all of Boeing's major manufacturing facilities around the world achieved ISO 14001 environmental certification, the globally recognised standard of an organisation's commitment to understand and continually improve its environmental performance.

### Operational Performance Improvements

On a revenue-adjusted basis since 2002, Boeing has reduced:

-  Carbon dioxide emissions by 22 per cent
-  Energy consumption by 23 per cent
-  Hazardous waste by 35 per cent

Boeing Aerostructures Australia engineering and quality director Adnan Raghdo has been made a Fellow of the Royal Aeronautical Society of the United Kingdom. Established in 1866, the Society is one of the most respected aeronautical organisations in the world and Fellowship is the highest grade of membership attainable within the Royal Aeronautical Society. Jo Staines, general manager, program management office at Boeing Aerostructures Australia, said "This is tremendous recognition for Adnan's career in the aerospace industry and what he has contributed and undoubtedly will continue to contribute in the future."

John Roundhill, former vice president of product development for Boeing Commercial Airplanes, will be in Sydney to give the 51st annual Sir Kingsford Smith Memorial Lecture to the Royal Aeronautical Society on Wednesday 21 October at The Lakes Golf Club, Eastlakes at 18:00 hours for 18:30 hours. He will speak about "Connecting the world: Boeing's long-range commercial jetliners". For more information contact: [sydneybranch@raes.org.au](mailto:sydneybranch@raes.org.au)

## Environmental initiatives around Australia



*First flight of the RAAF F/A-18F Super Hornet*

### RAAF Super Hornets on target

Latest reports from Boeing Integrated Defense Systems in the US say delivery of Australia's first five Super Hornet F/A-18F Block II aircraft is progressing well. Aircraft #1 is currently undergoing testing in California at the Naval Air Station at China Lake, and aircraft #2 at the Naval Air Station, Patuxent River in Maryland for testing. Aircraft #3, #4 and #5 are moving well along the production line in St. Louis.

Australia is the first international customer for the aircraft. It has ordered 24 of the multi-role fighters, able to perform virtually every mission in the tactical spectrum, including air superiority, day/night strike with precision-guided weapons, fighter escort, close air support, suppression of enemy air defences, maritime strike, reconnaissance, forward air control and tanker missions.

The first Royal Australian Air Force (RAAF) Super Hornet was delivered within budget and ahead of schedule in July of this year, and the remaining 23 Super Hornets, each equipped with the Raytheon-built APG-79 Active Electronically Scanned Array (AESA) radar, will be delivered to the RAAF throughout 2010 and 2011.

Boeing sites around Australia are committed to reducing their environmental footprint through a variety of initiatives.

At Boeing Defence Australia (BDA) site at Defence Science and Technology Organisation (DSTO) in Port Melbourne, an "Environmental Action Plan" was developed by management in conjunction with the entire staff from managers to shop floor to identify energy, greenhouse and waste reduction opportunities. DSTO monitor their environmental performance through their EAP and strategy and have implemented several initiatives including separating and recycling materials (co-mingled bins), installing sensor lights, water efficiency devices, reducing water consumption and eliminating waste. Employees are also involved in greenhouse gas reduction initiatives.

The Boeing Australia Component Repairs team at Melbourne Airport, takes a 'waste-not, want-not' approach to environmental initiatives. While this may sound old-fashioned, the results are anything but as the site does incredible things in recycling

and re-using waste. They have used old office compactors and packing foam to make a shadow board for tools, they use collected rain water for gardens and washing aircraft components, and they have created recyclable boxes to ship parts to their customers so they are not creating waste wood.

At BDA's Williamstown site, employee Adam Smith recognised that with around 50 people working in the hangar, they used a tremendous number of plastic and polystyrene cups. "All in all, it was just wasting too many resources," he says. "Not just in terms of the plastic cups themselves but the numbers of rubbish bags and getting rid of the garbage throughout the day."

The solution was simple: re-usable drinking bottles in the hangar for water and coffee mugs for each employee. The initiative saves almost 100,000 plastic or polystyrene cups every year. The team at Williamstown also recycles up to 1500 giant milk bottles, 5,000 tin and aluminium cans, and has recently included other paper and cardboard products.



*Boeing Defence Australia hangar at Williamstown*



### A world record set for solar cell efficiency

A world record has been set for "terrestrial contractor solar cell efficiency" by a solar cell manufactured by Spectrolab Inc., a wholly-owned subsidiary of The Boeing Company. The cell can convert 41.6 percent of concentrated sunlight into electricity.

The record was independently tested by the U.S. Department of Energy National Renewable Energy Laboratory.

High efficiency solar cells in concentrator systems require fewer cells to produce the same electrical output as conventional solar cells. They enable energy producers to generate more electrical power from typical industrial solar panels and pass on lower costs to homeowners, businesses and other end users.

"This latest record asserts Spectrolab's leadership position and brings the industry one step closer to achieving affordable solar electricity," said David Lillington, president of Spectrolab.

Spectrolab is the world's leading supplier of multi-junction photovoltaic solar cells, solar panels, searchlights and solar simulators and recently celebrated its 50<sup>th</sup> anniversary. Its products have powered satellites since 1958 and have contributed to the on-orbit success of numerous commercial, national security and civil space missions.

## 747-8 engine flies through first phase of tests

Progress on the assembly of the 747-8 Freighter is continuing apace as mechanics completed the installation of the new GEnx-2B engines on airplane No. 1 in final assembly at the factory in Everett, Washington.

The GEnx-2B engine has continued its progress through its certification testing and recently completed the first phase of flight testing on GE's 747 flying testbed.

"The GEnx-2B engine has performed very well during more than 1,500 hours of ground certification tests and 100 hours of flight testing," said Tom Brisken, general manager of GE Aviation's GEnx program.

The GEnx-2B is based on the GEnx-1B engine launched with the 787 Dreamliner. The GEnx-2B engine has been designed for the 747-8 and rated at 66,500 pounds of thrust.

With the GEnx-2B engines, the 747-8 Freighter will be 17 percent more fuel efficient than the 747-400 Freighter, resulting in a 17 per cent reduction in carbon emissions. It also will have a noise footprint that is 30 per cent smaller than its predecessor, making it a QC2-compliant airplane on both departure and arrival.

The 747-8 Freighter is expected to make its first flight in the fourth quarter of this year, with first delivery scheduled for the third quarter of 2010.

Boeing has secured 78 orders from leading cargo operators for the new 747-8 Freighter including Cargolux, Nippon Cargo Airlines, AirBridge Cargo Airlines, Atlas Air, Cathay Pacific, Dubai Aerospace Enterprise, Emirates SkyCargo, Guggenheim and Korean Air all have placed firm orders.



*Boeing hangs GEnx-2B engines on the 747-8 Freighter*

## Boeing Defence Australia to provide Integrated Logistics Support for Thales' Australian Army vehicle program bid

Boeing Defence Australia (BDA) will be providing Integrated Logistic Support (ILS) to Thales' bid for the Australian Army LAND121 Phase 4 program.

LAND121, also known as Project Overlander, will replace the Army's fleet of logistic support vehicles. Phase 4 will provide armoured light mobility vehicles to improve the safety of deployed troops.

Thales is offering a Protected Mobility Vehicle – Light (PMV-L) for Land121 Phase 4.

BDA will provide Thales' vehicle with ILS, a technique which ensures the supportability of an equipment item during its design and development.

The end goal of ILS is to create systems that last longer and require less support, thereby saving costs by achieving a higher return on long-term investments.

[www.boeing.com.au](http://www.boeing.com.au)

## Velocity

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## Student travel, Boeing style

### International aviation experience and exposure for focal university student

For your first overseas experience, it doesn't get much better than the trip taken by Queensland University of Technology student Scott McNamara this year. Scott, who recently graduated from the university with a Bachelor of Engineering in Aerospace Avionics with first class honours, was awarded a travel bursary as part of the Boeing University Relations program to visit the company's Washington State sites.

Scott was chosen by Professor Rod Walker, "Scott is a really exceptional student who is now a leading Unmanned Aerial Systems operator on the SmartSkies project. The bursary not only enabled him to see a breadth of aerospace sites, but also attend a senior project meeting in Denver afterwards and got to meet some of world's leading Unmanned Aerial Vehicle researchers."

The visit included the major sites of Seattle including the Museum of Flight, the Space Needle and naturally Boeing Commercial Airplanes' factory in Everett.

"The trip to Seattle was especially memorable," says Scott. "It was a real eye-opener to the diversity of projects being undertaken by Boeing and a brilliant opportunity to network with people from all aspects of aviation – from factory line workers to world-leading researchers.

"Seeing the production line for then new 747-8 in Everett was amazing – firstly seeing the fuselage in two pieces, and then another down the line nearly completed and ready for painting.

"I was also fortunate enough to receive a tour from Dr John Vian of the Vehicle Swarm Technology Lab at the Boeing Development Center where I got a live demonstration, giving me a real insight into the future of the aviation industry," he said.

As part of the International University Relations program, Boeing provides travel bursaries to QUT to support avionics students in gaining industry experience.



*Scott McNamara (far right) with fellow QUT students at the UAV Challenge*