



# Media Release

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## **Bushlight India Project is Australia's top 2011 engineering achievement**

At the 2011 Australian Engineering Excellence Awards dinner, the Bushlight India Project was awarded the highest honour by winning the Sir William Hudson Award for engineering excellence. This gala event was hosted by Engineers Australia's National President, Merv Lindsay, at the Great Hall of Parliament House Canberra on Wednesday 23 November.

The Engineers Australia Sir William Hudson Award was presented by Brett Jones, Executive Officer Production, Snowy Hydro Limited, to Michael Tuckwell, Senior Project Manager of CAT Projects, Paul Rodden, Senior Project Engineer of CAT Projects, Lyndon Frearson, General Manager of CAT Projects and Grant Behrendorff, Director, CAT Projects.

The Bushlight India Project demonstrates a fine integration of Australian Engineering with community organisations using renewable energy to provide electricity to remote villages in India who otherwise don't have power. Utilising \$2 million in funding from the Australian Government as part of the Asia-Pacific Partnership on Clean Development and Climate, the Bushlight India Project has given opportunities to countless small businesses. The project model is unique for its service philosophy of providing an agreed, assured amount of energy - available 24/7 - to all consumers. This is achieved through a consultative energy planning process and a low cost household energy meter. This project has the potential to impact over 150,000 remote villages in India, and potential for export throughout the developing world.

The Bushlight India Project was selected from 50 national finalists. The judges were particularly impressed by the way in which the project developed robust and practical systems for providing improved living conditions for hundreds of thousands of people. The project has been successful in building strong community partnerships across a culturally sensitive environment.

### **Australian Engineering Excellence Awards Winners**

#### ***ANZAC ASMD Active Phased Array Radar - CEA Technologies Pty Ltd.***

CEA Technologies has developed and delivered a ground-breaking system as part of the Royal Australian Navy's ANZAC Class Anti-Ship Missile Defence Upgrade Program. Over 3 years, CEA Technologies developed a state-of-the-art Radar and Illumination System that meets current threats as well as countering projected threats in the future. The Active Phased Array Radar System is a world-first and is an incredible tool and asset to defensive strategies. The judges were impressed with this world-class innovation having been developed by a small company. The award was accepted by Ian Croser, Technical Director of CEA Technologies.

#### ***West Gate Bridge Strengthening Project - VicRoads; John Holland; Flint and Neill; Sinclair Knight Merz.***

This project has been one of the most complex and high-risk engineering design and construction strengthening projects in Australia in recent years. To achieve this, the team undertook incredibly innovative and risky methods and extended the boundaries of engineering knowledge. It included world-first structural analysis and modelling, the largest application of carbon fibre to a bridge structure and an innovative safety program, all while the bridge maintained its critical use as a transport link in Melbourne. The works were completed within three years.

The award was accepted by John Cunningham, VicRoads Project Director of the M1 Upgrade and Alan Platt, Alliance General Manager of West Gate Bridge Strengthening Alliance.

***Clem Jones Tunnel (CLEM7) - AECOM; Parsons Brinckerhoff; Golder Associates on behalf of Leighton Contractors and Baulderstone.***

The Clem Jones Tunnel (CLEM7) gives commuters the ability to bypass Brisbane's CBD, reducing travel time by up to 15 minutes. AECOM, Parsons Brinckerhoff, Golder Associates on behalf of Leighton Contractors and Baulderstone designed and constructed this project over a 7 year period. Successfully and on-budget, the Clem Jones Tunnel has now been completed and is a fantastic engineering achievement. The twin-lane, 4.8km-tunnel was delivered almost 7 months ahead of schedule. With an electronic tolling system, 18 bridges and an intricate 3-level interchange, the Clem Jones Tunnel is an impressive solution to the traffic-congestion problem in Brisbane. The award was accepted by Darren Watt, Managing Director of Golder Associates, Roger Pattison, Director of Power AP, Parsons Brinckerhoff, Peter Kouparitsas, Project Director of AECOM.

***Utah Point Multi-User Bulk Export Facility - Port Hedland Port Authority and PINC Group.***

With the global demand for Western Australia's minerals increasing, there is an ever accelerating pressure for expanded port facilities. The Utah Point Multi-User Bulk Export Facility has gone a long way towards alleviating this pressure by providing an additional 21 million tonnes of export capacity per annum. Innovative new technologies were utilised in this project to improve port efficiency and address community concerns in relation to dust, noise and traffic. The facility has exceeded performance expectations by achieving full operation within the first 6 months, delivering export sales of approximately 1.5 billion dollars per annum. The award was accepted by Warren Farrow, Port Development Manager of Port Hedland Port Authority, and Neil Parker, Managing Director of PINC Group.

***FlexGrid™ - Finisar Australia.***

With the exponential growth of data capacity on the internet, the demand for more flexible and efficient optical network services from telecoms carriers is ever increasing. Finisar has met this demand with its new FlexGrid technology. FlexGrid is a unique software enhancement which allows telecommunications carriers to deploy bandwidth, flexibly and dynamically in their networks. Well ahead of their global competitors, Finisar have overcome several engineering challenges and have now successfully launched FlexGrid to the market. The award was accepted by Dr Steve Winnall, Director of Product Engineering of Finisar Australia.

***State Theatre Centre - Redefining Structural Innovation - Airey Taylor Consulting.***

Airey Taylor Consulting have delivered design excellence for the State Theatre Centre of Western Australia. Large portions of the Centre were submerged beneath the water table and adjacent to road and rail networks. The new structure had to account for low vibration, noise and humidity in a small building footprint with surrounding heritage buildings. These stringent client and site requirements were challenging and the highly complex project demanded lateral structural solutions. All these challenges were creatively met with the State Theatre of Western Australia. The award was accepted by Bassam Matty, Senior Associate of Airey Taylor Consulting.

**Engineering Innovation Award - sponsored by AusIndustry**

***Organovo: The World's First Commercial 3D Human Tissue Bioprinter - Invetech Pty Ltd and Organovo, Inc.***

Imagine being able to print human tissues on demand. This was the inspiration and challenge for start-up company Organovo as they partnered with Melbourne-based Invetech to build the world's first production 3D bioprinter. For decades, the goal of tissue engineers has been to advance beyond two dimensional cell cultures to create three dimensional organs. Within just 9 months, this partnership had solved engineering challenges that had confounded the biomedical industry for decades to design, develop, manufacture and ship the world's first commercial 3D bioprinter. The printer includes robotically-controlled precision print heads and a computer-controlled, laser-based calibration system.

The award was presented by Senator the Hon. Kim Carr, Minister for Innovation, Industry, Science and Research to Peter Riddell, Manager of Business Development, Biomedical Instruments and Devices, and Chris Leigh-Lancaster, Program Manager of Invetech.

### **Environmental Engineering Excellence Award**

#### ***Rehabilitation of Former Snowy Scheme Sites – Kosciuszko National Park – National Parks and Wildlife Service.***

Over the last 6 years, the National Parks and Wildlife Service has been working tirelessly to rehabilitate damaged areas of the former Snowy Scheme Sites. Funded by Snowy Hydro Limited, the Rehabilitation Team implemented major landform stabilisation projects. They have moved hundreds of thousands of cubic metres of rock and soil and have planted over 650,000 endemic trees, shrubs and grasses. Kosciuszko National Park has undergone an environmental and ecological transformation thanks to the National Parks and Wildlife Service and is flourishing once more. The award was presented to Dave Darlington, Southern Ranges Regional Manager of National Parks and Wildlife Service, Elizabeth MacPhee, Rehabilitation Officer of National Parks and Wildlife Service, and Gabrielle Wilks, Environmental Officer of National Parks and Wildlife Service.

The excellence of members of Australia's engineering team was also celebrated at the dinner with awards for:

*2011 Professional Engineer of the Year* to **Dr Jane Sargison** of Tasmania Division;  
*2011 Young Professional Engineer of the Year* to **Emma Charlton** of Queensland Division; and  
*2011 Engineering Officer of the Year* to **Jaswant Deo** of Northern Division.

In addition, the 2011 Engineers Australia National President's Prize was awarded by Merv Lindsay to Engineering Aid Australia. This philanthropic organisation which funds the ***Indigenous Australian Engineering Summer Schools*** is dedicated to raising the aspirations of Indigenous high school students, encouraging them to remain at school and consider engineering as a profession. The schools are held at either the University of Sydney, University of NSW, Newcastle University or Curtin University. The award was accepted by Peter Berry, Director and CEO of Engineering Aid Australia, and Anne Vans-Colina, Director of Engineering Aid Australia.

Further information and photos about the 2011 Australian Engineering Excellence Awards project winners, finalists and individual award recipients can be found at [www.excellenceawards.org.au](http://www.excellenceawards.org.au)

**Media Contact:** John Bright – 0407 234 490 / [jbright@engineersaustralia.org.au](mailto:jbright@engineersaustralia.org.au)  
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