



NATIONAL ENERGY EFFICIENCY CONFERENCE 2016

15-16 November, Sydney

Building expertise and growing markets

Onsite Delegate Handbook

Welcome to **Sydney!**



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Message from the Energy Efficiency Council President

Energy efficiency will be critical to the security and affordability of our energy systems as we transition to new forms of generation.

However, efficiency isn't just a support act for generation – it can deliver huge amounts of capacity and more than half of Australia's 2030 carbon reduction target.

The benefits for our energy system and carbon reduction are rivalled only by the economic prospects.

The global market for smart energy products and services is currently worth more than \$290AUD billion annually – and it's growing rapidly. Just one per cent of this market would inject billions of dollars into Australia's economy and create thousands of jobs.

Momentum is growing as our political leaders move to grasp these opportunities. All of the major parties in Australia have set targets to improve our energy productivity by between 40 and 100 per cent by 2030.

However, we'll fail to meet these targets if we don't take action to reform our energy markets and improve Australia's energy efficiency policies. It's time to lift our game. Despite leadership from states like New South Wales, as a nation we are a long way behind our competitors in the US, Europe and even China when it comes to energy efficiency.

Now in its eighth year, the National Energy Efficiency Conference is the perfect platform to dissect, debate and drive the future of our sector.

I'd like to thank the Conference's major sponsor, NSW Office of Environment and Heritage, and to acknowledge all of our supporters.

I'm delighted that Dr Brian Motherway, Head of Energy Efficiency at the International Energy Agency, can be with us to lead a formidable roster of international and local experts, energy users and policy-makers as we unravel the challenges and unpack the opportunities.

These opportunities are there for us to seize – a stronger economy, new industries, healthier homes and workplaces, and a clear pathway towards a low carbon future.

Tony Arnel
President, Energy Efficiency Council



Message from the NSW Environment Minister Mark Speakman

Welcome to the National Energy Efficiency Conference 2016. The NSW Government is delighted to sponsor your Conference. Your Conference is where the finest minds of Australia's energy efficiency industry help to set the national agenda.

Your industry is integral to the success of the NSW Energy Efficiency Action Plan, and to the programs that support it.

The NSW Government has worked with the energy efficiency industry to assist more than 18,000 NSW businesses in recent years. Together, we have helped them save a total of \$153 million in energy costs annually, and have reduced their greenhouse gas emissions by more than 380,000 tonnes per year.

Changes to the Energy Savings Scheme in 2015 will ensure that we continue energy and bill savings into the future, with NSW businesses and households estimated to save a total of \$13 billion on their energy bills between 2015 and 2040.

The Government is co-investing in gas monitoring and efficiency projects, providing up to \$40,000 of matched grant funding to competitively-selected gas-intensive businesses to help businesses realise gas efficiency opportunities.

With gas price volatility and ever-increasing pressures to stay competitive, businesses have responded strongly.

Meanwhile, the Commercial Building Disclosure Program is set to expand on 1 July 2017. This will allow regular National Australian Built Environment Rating System (NABERS) energy ratings for an estimated 1000 additional office buildings, bringing with it all of the benefits of benchmarked energy use. This should accelerate the uptake of energy efficiency in the office sector as the use of ratings tools expands.

Enjoy your time at the Conference, and thank you for bringing your expertise to discussions which will help shape Australia's energy future.

The Hon Mark Speakman MP
NSW Environment Minister

Welcome to the **National Energy Efficiency Conference 2016**



Assistance

If you have any questions or need assistance, please talk to the Energy Efficiency Council team at the main registration desk.

Coffee

Please enjoy complimentary barista style coffee, generously sponsored by Optimal Group, provided from two coffee carts located within the Exhibition Hall.

Catering & dietary requirements

Morning tea, lunch and afternoon tea will be available in the Exhibition Hall and is included as part of your registration fee. If you have advised the Conference Organisers of special dietary requirements, please speak to the catering staff during the breaks, or at any of the social functions that you may be attending. Catering staff will have a full list of those with special dietary requirements.

Networking drinks

Networking drinks will be held in the Exhibition Hall on both days following the close of the final plenary session.

Energy Efficiency Council (EEC) AGM

The EEC AGM will be held on Tuesday 15 November from 5.45pm – 7.00pm in Room 6A.

Entry is free of charge but is restricted to EEC Members.

EEC Membership

If your organisation is not yet a member of the EEC and you would like to find out how you can get involved, please visit the EEC trade stand and speak to a friendly EEC staff member.

Masterclasses

The Battery Storage for Business Masterclass takes place in Room 7ABC on Tuesday 15 November, between 11.00am – 5.10pm.

The Energy Management for Facility Managers Masterclass takes place in Room 7ABC on Wednesday 16 November, between 11.00am – 4.30pm.

Separate registration is required for these Masterclasses.

Emergency

In case of an emergency, you will be advised of the status via a loudspeaker. Please only evacuate the building if and when advised to do so. Please leave via the nearest marked exit. The Australian Technology Park emergency assembly point is at the right hand end of the car park, located in front of Bay 4.

Evaluation form

Please take a moment to complete your Delegate Evaluation Form and return it to the Registration Desk at the end of the Conference. We encourage all delegates to complete this to help to improve the event in future years. Alternatively, complete your evaluation online at:

www.surveymonkey.com/r/NEEC16

Exhibition

We encourage all delegates to take time to explore the exhibition and chat to exhibitors, who represent a range of energy efficiency product suppliers and service providers.

Our 2016 exhibitors are:

- NSW Office of Environment & Heritage
- Department of Environment and Energy
- Vivid Industrial & Vivid Illumalite
- Standards Australia
- Aeroseal Duct Sealing Services
- Energetic Lighting
- Optimal
- Energy Efficiency Council

Gala Dinner

The Gala Dinner & National Energy Efficiency Awards 2016 will be held in the Dining Room from 7.30pm to 10.30pm, on Tuesday 15 November, for all delegates who have registered for the Dinner.

Dress code for the Dinner is business attire.

If you have been informed that a seat has been reserved for you, please check the back of your delegate badge for your table number.

If you have not registered for the Dinner but wish to attend, please contact EEC team at the registration desk to check availability and to book your place.

Lunchtime briefing: NSW Government's Draft Plan to Save Energy and Money

The NSW Government has released *A Draft Plan to Save NSW Energy and Money* with new policy proposals to meet the NSW energy savings target. Come and hear about the plan first-hand from the policy team and ask them what it means for you.

The briefing will take place during lunch on Wednesday 16 November, from 12.45pm in the Dining Room.

Name Badges

Please wear your name badge throughout the event and return your badge and lanyard to the Registration Desk for recycling at the end of the event.

Mobile Phones

Out of courtesy to speakers and other delegates, please ensure your mobile phone is switched to silent when in Conference sessions. We kindly ask that phone calls are taken in the Exhibition Hall and not at the back of the session rooms.

Photography

An official photographer will be on site during the Conference and Gala Dinner.

Images captured may be used in future EEC printed or digital collateral and promotions.

Please inform the photographer if you do not wish to be photographed.

Program

See pages 12-14 and 17-18 for the detailed Conference program or check the program boards in the Exhibition Hall.

Presentations

A link to the presentations from the Conference speakers (who have given permission) will be sent to all attendees in a post event email by Friday 2 December.

Toilets

Several toilets are available throughout the Exhibition Hall.

Wi-Fi

Free wireless internet is available for Conference attendees.

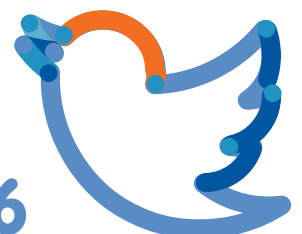
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Join the conversation

@EECouncil @IEA_EBC #NEEC16





A message from the Energy in Buildings and Communities Programme

The International Energy Agency's (IEA) research programme on 'Energy in Buildings and Communities' (EBC) is thrilled to be collaborating with the Energy Efficiency Council to deliver the National Energy Efficiency Conference 2016. The Conference program has been carefully developed by a select group of Australian and international energy experts, and captures a truly global perspective.

The program showcases speakers from all over the world, who will share innovation, expertise and resources to accelerate the transformation of the built environment towards more energy efficient and sustainable buildings and communities.

We hope you find the National Energy Efficiency Conference 2016 a valuable experience!

A. Eckmanns

Andreas Eckmanns

Chair, IEA Energy in Buildings and Communities Programme



International keynote speaker



[@BrianRMotherway](https://twitter.com/BrianRMotherway)



Dr Brian Motherway, Head of Energy Efficiency, International Energy Agency (IEA)

Dr Brian Motherway is the headline international speaker for this year's Conference. Dr Motherway leads the IEA's work supporting energy efficiency globally through analysis and policy advice. He joined the IEA in early 2016 after almost ten years in senior strategic roles at the Sustainable Energy Authority of Ireland, including four years as Chief Executive from 2012. He holds a Bachelors and Masters degrees in engineering and a PhD in sociology.

International Energy Agency's Energy in Buildings and Communities Programme

Dr Motherway will be joined at the National Energy Efficiency Conference 2016 by an unparalleled group of international efficiency experts, from the International Energy Agency's Energy in Buildings and Communities Programme:



Andreas Eckmanns,

Chair, IEA Energy in Buildings and Communities Programme



Prof Carsten Rode,

Department of Civil Engineering, Technical University of Denmark



Dr Ian Hamilton,

Lecturer, UCL Energy Institute, University College London



Dr Takao Sawachi,

Director of Housing Department, National Institute for Land and Infrastructure Management



Prof Per Heiselberg,

Division of Architectural Engineering, Department of Civil Engineering, Aalborg University



Dr Dietrich Schmidt,

Head of Department Energy Systems, Fraunhofer Institute for Building Physics



Helmut Strasser,

Head of Energy Department, SIR-Salzburg Institute for Regional Planning and Housing



Dr Peter Wouters,

Director Development and Valorisation, Belgian Building Research Institute



Dr Alexander Zhivov,

Energy Branch US Army Corps of Engineers, ERDC – CERL

Leaders and experts from Australia and abroad



The Hon Mark Speakman MP,
NSW Minister for Environment
and Heritage



The Hon Mark Butler MP,
Federal Shadow Minister for Climate
Change and Energy



Rosemary Sinclair,
Chief Executive Officer,
Energy Consumers Australia



Mike Underhill,
Chief Executive, New Zealand Energy
Efficiency and Conservation Authority



Jayaraman Balachandar,
Head of Building Performance and
Sustainability, Building Technologies –
Middle Asia Pacific, Siemens



Dr Kevin Mo,
Managing Director, Paulson Institute
Representative Office



Paul Murfitt,
Director, Energy Efficiency,
Energy, Environment & Climate Change,
Department of Environment, Land,
Water and Planning



Rob Heferen,
Deputy Secretary, Department of
Environment & Energy



Kylie Hargreaves,
Deputy Secretary, Resources,
Energy & Lands, NSW Department
of Industry



Matthew Warren,
Chief Executive Officer, Australian
Energy Council



Stefan Preuss,
Associate Victorian Government
Architect, Office of the Victorian
Government Architect



Kate O'Carroll,
Principal Project Manager,
GreenSync



Amanda McKenzie,
Chief Executive Officer,
Climate Council



Jennifer Conley,
Executive Director, Australian
Advanced Manufacturing Council



Michael Oppermann,
Principal Policy Officer, NSW Office
of Environment and Heritage



Bronwyn Evans,
Chief Executive Officer,
Standards Australia



Chris Nunn,
Head of Sustainability,
Property, AMP Capital



Glenn Byres,
Chief of Policy and Housing,
Property Council of Australia

Leaders and experts from Australia and abroad



Tristan Edis,
Director – Analysis & Advisory,
Green Energy Markets



Merrily Hunter,
Managing Director, MAC Energy
Efficiency Group Pty Ltd



Hakan Ozelik,
Portfolio Development Manager –
Digital Enterprise, Siemens



Francesca Muskovic,
National Policy Manager –
Sustainability and Regulatory Affairs,
Property Council of Australia



Paul Greenop,
Head of Portfolio Management,
Clean Energy, Finance Corporation



Joann Wilkie,
General Manager, Energy Productivity
Branch, Department of Environment
and Energy



Andrew Richards,
Chief Executive Officer, Energy Users
Association of Australia



Neil Savery,
General Manager, Australian Building
Codes Board



Wei Sue,
Research Projects Manager,
ClimateWorks



Jodie Pipkorn,
A/g Manager, Residential
Buildings Team, Department of
the Environment and Energy



Alan Pears,
Senior Industry Fellow, RMIT
University of Technology



Kathryn Lucas-Healey,
Senior Policy Officer, Department
of Environment, Land, Water
and Planning



Henry Adams,
Director,
Common Capital



Nina James,
General Manager, Corporate
Sustainability, Investa



Warner Priest,
Business Development Manager –
Emerging Technologies, Siemens



A/Prof Adrian Barnett,
Senior Research Fellow,
Queensland University



Dr Mark Bonnar,
Managing Director, Southern Cross
Venture Partners



Susan Read,
Senior Team Leader, Sustainable
Government Team, NSW Office of
Environment and Heritage

Leaders and experts from Australia and abroad



Samuel Redmond,
Head of Business Development,
Greenearth Energy Ltd



Shauna Coffey,
Head of Projects, Energy
Efficiency Council



Patrick Crittenden,
Director, Sustainable
Business Pty Ltd



Chris Derksema,
Sustainability Director,
City of Sydney



Nick Carter,
Business Development – C&I
Customers, Tesla



Dr Su Wild-River,
Energy Efficiency Senior Project
Officer, ACT Government



Jesse Clarke,
Building Scientist, CSR Building
Products Limited



Tosh Szatow,
Director, Energy for
the People



Sam Burke,
Acting Assistant Director, Land and
Property, Victorian Department of
Treasury and Finance



Emily Yip,
Senior Team Leader – Sustainable
Households, NSW Office of
Environment and Heritage



Tom Yankos,
Business Analyst,
ClimateWorks



Dr Cheryl Desha,
Head of Environmental Systems
Discipline, Queensland University
of Technology



Rory Lonergan,
Director, Corporate and Project Finance,
Clean Energy Finance Corporation



Lauren Solomon,
Manager, Consumer Policy
and Programs, AGL

Thank you to all our speakers & session chairs

The Energy Efficiency Council (EEC) extends warm thanks to all speakers and session chairs who have contributed significant time and expertise to help create a dynamic and engaging Conference program.

In lieu of speaker gifts, the EEC has made a modest donation to Engineers Without Borders Australia.

Engineers Without Borders (EWB) Australia's vision is that everyone has access to the engineering knowledge and resources required to lead a life of opportunity, free from poverty. EWB works in Australia and overseas to connect, educate and empower people through humanitarian engineering.

Their operations include work with indigenous and Torres Strait Islander communities in Australia, school outreach in regional and rural areas to encourage young Australians to take up technical career pathways, research and educational study programs for engineering students, as well as overseas capacity building placements in Timor-Leste, Cambodia and Vietnam.



**engineers
without borders
australia**

Have you cottoned on

World-leading, custom-built technology to save energy and respond to climate change shows there's lots to learn from sustainability initiatives in the cotton industry.

That wasn't the case when Shane McGregor, Chief Operations Officer at Namoi Cotton Co-operative, began work in cotton 25 years ago.

'When I started in the industry,' Shane says, 'if you said you worked in cotton, you were beaten up at barbecues.'

And yet, the latest figures show that in the last 12 years chemical use has fallen 92 per cent and water productivity has risen 40 per cent.

Namoi's story

Namoi Cotton Co-operative is headquartered in Wee Waa, NSW and has 10 of its 11 gins — facilities that remove cottonseed and plant material — in New South Wales, the state that grows two-thirds of Australia's crop. Its NSW operations stretch from Mungindi in the north to Hillston in the south.

Most people don't realise the amount of energy to get cotton to market. Like many organisations, Namoi Cotton began by looking at its electricity use and implementing projects like lighting upgrades, as well as reducing energy in bale-pressing operations. But when the Office of Environment and Heritage's Gas Efficiency Funding opened late 2015, Shane wondered if it were an opportunity to take real action to reduce Namoi's gas use.

The program co-invests with businesses to implement gas monitoring and efficiency projects. Savings data is used to develop the Energy Savings Scheme, the NSW Government's flagship energy-efficiency program.

By Jeremy Tarbox, OEH Gas Efficiency team

'Initially I was loath to get involved in the project,' Shane says. 'In my experience, every time we talk to people about grants, the grants were primarily focussed on esoteric areas of study. They weren't really industry or commercially-based. So when I first got the notification through, I was a bit dismissive, in all honesty. I gave the guys a call and said, "Can you please stop sending me this stuff?"'

But when we asked him about Namoi's ideas to save gas, we found a great opportunity at its Hillston gin — moisture control — that fitted the funding conditions. We explained that maximum funding per site was \$40,000... and Shane was excited.

'Forty thousand dollars goes a long way in agriculture,' he said. 'Forty thousand dollars doesn't even get you a vest and hard hat in the mining sector!'

Climate adaptation

The recent introduction of round modules in the cotton industry means some harvesting happens when it's wetter, so the cotton can come in with higher moisture levels. For optimum cotton-ginning, moisture levels in the fibre are brought to six to seven-and-a-half per cent. Gas burners in drying systems are used to dry, then humidifiers to get the moisture levels right. It's a difficult balancing act to achieve the best outcome for the grower and avoid wasting gas.

'Our intention was to get moisture readings in different parts of the gin, and to have those sensors adjust the settings to the burners and the humidifiers as the cotton is ginned,' Shane says. 'So if the cotton was coming in relatively

to gas savings yet?

dry, the burners would adjust down, using less gas, and we'd apply less heat, automatically.'

Namoi Cotton aims to go from using around three dollars of gas per bale, to under a dollar.

In an area with wetter winters, such as Hillston, more gas is traditionally used. The project will help drought-proof the industry by adapting to climatic change at harvest each season. The largest savings will be in dry years — when yields and moisture content are down — and manual gas settings would have formerly eaten into falling profits.

'During drought, agricultural companies pare down,' Shane says. 'If you can reduce energy consumption — that could mean more people you can keep employed that previously you might have had to let go.'

Stage one of the project will install measuring systems on the main LPG gas line, all three burner systems, and the humidification system. Stage two will install the moisture sensors, and link them to control panels on each burner and the humidifier, to regulate gas use.

Local solutions

'There are different systems that can do similar things,' Shane says, 'but not with the sensors we're building. Some of the technologies are prohibitive cost-wise. What we're trying to do is find a cost-effective mechanism in an existing gin facility, and then implement it across a larger network at a more cost-efficient pricing level.'

The gas meters were bought and installed by a company in Seelands, near Grafton. Most wiring and building of the control panels will be done by Namoi Cotton's electrical team, of which apprentices are an integral part. The team will be supported by a city-based electrical-engineering firm building the moisture sensors.

'To compete in this environment,' Shane says, 'we build a lot of our own solutions. When the round bale was introduced to Australia, the rest of industry went outside and bought US machines. Namoi Cotton designed, engineered, constructed, and installed round-bale handling solutions into every one of its gins, using our engineers and local people.'

As the other players in the industry 'cotton on,' service-providers will see an uptick in regional business opportunities. 'Once these sensors go in and people realise it's a realistic alternative,' Shane says, 'they'll be installing them five seconds later.'

Staying competitive

What will successful project commissioning mean?

'Once and for all,' Shane says, 'you'll be able to settle the issue, "Does this gin just use this amount of gas, or is that just the cotton coming in?" That will kill off all those old unknowns that have led to inefficiency — because suddenly you're able to compare "apples with apples".'

'If this solution proves itself — and we're really expecting it will; it's a bit of a no-brainer — we'll roll it out to the next phase of gins to bring gas costs in line.'

'Ginning cotton in Australia is a very, very competitive market — and has been for years. Namoi Cotton is the only remaining Australian-owned large ginner. The only way for us to compete in this industry sector is to reduce variable cost — to become the lowest-cost operator. That's where we need to work towards. If we can reduce costs through energy-savings, sustainability, and innovation — that's what Australians do.'

What's your big idea?

www.register.environment.nsw.gov.au/actionmatters

innovation. Because **action matters** to us.

Program 2016

Tuesday 15 November

8:00am Registration and coffee (served in Exhibition Hall)

8.45am **Welcome from Energy Efficiency Council President**

Tony Arnel, President, Energy Efficiency Council

8.55am **Welcome from International Energy Agency's Energy in Buildings and Communities Programme Chair**



Andreas Eckmanns, Chair, IEA Energy in Buildings and Communities Programme

9.10am **Global forces and world markets for energy efficiency**

Chair – Luke Menzel, Chief Executive Officer, Energy Efficiency Council

Dr Brian Motherway, Head of Energy Efficiency, International Energy Agency (IEA)

Amanda McKenzie, Chief Executive Officer, Climate Council

Paul Greenop, Head of Portfolio Management, Clean Energy Finance Corporation

International markets for energy efficient products and services are worth over \$290AUD billion per annum and growing rapidly. International and local leaders will look at the global forces shaping markets for energy efficiency, and the implications for Australia.

10.30am Morning tea (served in Exhibition Hall)

11.00am **Disruption, security and future energy costs**

Chair – Rob Murray-Leach, Head of Policy, Energy Efficiency Council

Matthew Warren, Chief Executive Officer, Australian Energy Council

Rosemary Sinclair, Chief Executive Officer, Energy Consumers Australia

Andrew Richards, Chief Executive Officer, Energy Users Association of Australia

The Hon Mark Butler MP, Federal Shadow Minister for Climate Change and Energy

Australia's energy markets are hitting a tipping point. Gas and electricity tariffs are changing dramatically and distributed generation and microgrids are emerging as real players in the energy sector. This session will bring together leaders and energy users to discuss the impacts of these disruptions.

Battery Storage for Business
Masterclass (Room – 7ABC)*

12.30pm Lunch (served in Exhibition Hall)

* Separate registration is required for these Masterclasses.

Join the conversation
@EECouncil @IEA_EBC #NEEC16



Program 2016

Tuesday 15 November

1.30pm

Energy efficiency schemes

(Room – Dining Room)

Chair – Tristan Edis, Director – Analysis & Advisory, Green Energy Markets

Kathryn Lucas-Healey, Senior Policy Officer, Department of Environment, Land, Water and Planning

Dr Su Wild-River, Energy Efficiency Senior Project Officer, ACT Government

Michael Oppermann, Principal Policy Officer, NSW Office of Environment and Heritage

Merrily Hunter, Managing Director, MAC Energy Efficiency Group Pty Ltd

Henry Adams, Director, Common Capital

Energy efficiency schemes in NSW, Victoria, South Australia and ACT play a key role in our sector. How can governments, industry and the community get the most out of these programs?



Microgrids and precinct energy

(Room – 6A)

Chair – Rob Murray-Leach, Head of Policy, Energy Efficiency Council

Warner Priest, Business Development Manager – Emerging Technologies, Siemens

Dr Dietrich Schmidt, Head of Department Energy Systems, Fraunhofer Institute for Building Physics

Helmut Strasser, Head of Energy Department, SIR-Salzburg Institute for Regional Planning and Housing

Kate O'Carroll, Principal Project Manager, GreenSync

Tosh Szatow, Director, Energy for the People

Global and local experts will examine cutting edge models for precinct energy, including regional towns that rely on locally-produced energy and district heating systems.

SIEMENS

Saving energy in public buildings

(Room – 6B)

Chair – Shauna Coffey, Head of Projects, Energy Efficiency Council

Wei Sue, Research Projects Manager, ClimateWorks

Susan Read, Senior Team Leader, Sustainable Government Team, NSW Office of Environment and Heritage

Sam Burke, Acting Assistant Director, Land and Property, Victorian Department of Treasury and Finance

Dr Alexander Zhivov, Energy Branch US Army Corps of Engineers, ERDC – CERL

Governments around the country are ramping up programs to save energy in their operations. This session will look at key issues for governments and service providers.

Battery Storage for Business Masterclass (Room – 7ABC)*

3.00pm

Afternoon tea (served in Exhibition Hall)

3.30pm

Australian Government Keynote – the future of energy management

Rob Heferen, Deputy Secretary, Department of Environment & Energy

4.00pm

Building a regional market for energy efficiency

Chair – Luke Menzel, Chief Executive Officer, Energy Efficiency Council

Dr Kevin Mo, Managing Director, Paulson Institute Representative Office

Mike Underhill, Chief Executive, New Zealand Energy Efficiency and Conservation Authority

Bronwyn Evans, Chief Executive Officer, Standards Australia

Harmonising energy efficiency rules and regulations in the Asia-Pacific and beyond will create a larger, more stable and competitive market for energy efficient services and products. This session will examine what actions companies and governments need to take to boost exports and build business.

5.10pm

Networking drinks (served in Exhibition Hall)

* Separate registration is required for these Masterclasses.

Program 2016

Tuesday 15 November

5.45pm **Energy Efficiency Council Annual General Meeting** (Members Only) (Room – 6A)

7.30pm **Gala Dinner & National Energy Efficiency Awards 2016** (Room– Dining Room)

The National Energy Efficiency Awards 2016 celebrate excellence, innovation and leadership in energy efficiency. The winners of the National Energy Efficiency Awards 2016 will be unveiled at this memorable Gala Dinner. It is also an excellent opportunity to network with colleagues, friends old and new and Australia's most innovative energy users.

**ENERGY & CARBON
SOLUTIONS**

Tickets to the Gala Dinner are included in Full Conference registrations. If you have not registered for the Dinner but wish to attend, please contact EEC team at the registration desk to check availability and to book your place.

Energy & Carbon Solutions – Gala Dinner Sponsor

Our 2016 Gala Dinner Sponsors Energy and Carbon Solutions have a unique team with over 25 years combined industry experience in consulting, engineering and project management for large multi-site clients in industry and commercial businesses. Their vision is to deliver tailor-made effective and efficient projects, which reduce operating costs and promote environmental sustainability. From developing cogeneration solutions to installing energy efficient lighting, they have the best solution for your energy and carbon needs.



Australian Government



Changes to the Commercial Building Disclosure Program

From 1 July 2017, the mandatory disclosure threshold on commercial office buildings will be lowered to 1,000m².

Disclosure affected buildings and tenancies between 1,000m² and 2,000m² that are offered for sale or lease after 1 July 2017, will now also require a Building Energy Efficiency Certificate (BEEC) issued by the Department of the Environment and Energy before it is put to market.

More information on the changes to the Commercial Building Disclosure Program can be found at cbd.gov.au, or by calling 1800 020 131.

The Victorian Government is lifting energy efficiency and productivity across Victoria

The Department of Environment, Land, Water and Planning (DELWP) works with Victorian industry and the community to develop a secure and sustainable energy future for Victoria. While the energy sector is now privately owned, the Victorian Government aims to ensure all consumers have access to essential energy services. We invest in the development of innovative energy technologies. We build and support the energy industry through policy development and regulation. We also help Victorians manage their own energy use.

In June 2015, the Victorian Government released the *Energy Efficiency and Productivity Statement: Saving energy, growing jobs*. The statement outlines the Victorian Government's vision and priorities to deliver an energy efficient and productive economy for Victoria.

The six priorities for action are:

- 1** Creating new Victorian energy efficiency jobs and supporting existing ones
- 2** Making Victorian businesses more productive and competitive
- 3** Providing active support to relieve energy cost pressures on the most vulnerable
- 4** Improving the efficiency and quality of our residential and commercial buildings
- 5** Government leadership and best practice
- 6** Harnessing markets to ensure broad uptake of energy efficiency

The Victorian Government is now developing the *Energy Efficiency and Productivity Strategy*. The strategy includes a range of projects that will drive energy efficiency and increase energy productivity across the household, business, government and industry sectors.

Two of the key measures in the strategy are: Victoria's Energy Saver Incentive scheme and the Residential Efficiency Scorecard.



Residential Efficiency Scorecard

The Victorian Government is developing the Residential Efficiency Scorecard to help Victorians understand and improve the energy efficiency of their homes, while saving money on their energy bills.

The voluntary in-home energy efficiency assessment system includes a feature to help Victorian households better understand the energy performance of their homes during hot weather.



Energy Saver Incentive scheme (ESI)

The Victorian Government has reaffirmed its commitment to Victoria's Energy Saver Incentive (ESI) scheme. The scheme, which is also known as the Victorian Energy Efficiency Target (VEET), is helping Victorians cut their power bills and reduce greenhouse gas emissions, by giving households and businesses access to discounted energy-efficient products and services.

With abatement targets increasing from 5.4 million tonnes of greenhouse gas in 2016, to a target of 6.5 million in 2020 – Victoria's ambitious energy efficiency targets will result in a reduction of 30.2 million tonnes by 2020.

Want to find out more?



www.delwp.vic.gov.au/energy



energy.efficiency@delwp.vic.gov.au



**SIEMENS***Ingenuity for life*

Digitalization makes cities smart.

Intelligent infrastructure helps urban environments become more efficient, sustainable and livable.

Cities are where we live, work and play. Australia's five largest cities are home to more than 60% of the country's population and to cope with future growth we need smart infrastructure – digitally connected just like us.

Integrated and intelligent technologies from Siemens enable cities to rise to the challenges of population growth, traffic congestion, and energy efficiency targets.

Digitalized automation can create a reliable energy supply, smart transport systems, and efficient buildings. For cities of all sizes, digitalization is the key to maximizing resources, lowering operational costs, and reducing environmental footprints. But most importantly, it makes cities a better place to call home.

www.siemens.com.au/cities

Program 2016

Wednesday 16 November

8.00am	Registration and coffee (served in Exhibition Hall)		
8.45am	Welcome from Energy Efficiency Council Chief Executive Officer Luke Menzel, Chief Executive Officer, Energy Efficiency Council		
8.50am	Minister's Address The Hon Mark Speakman MP, NSW Minister for Environment and Heritage		
9.10am	Health, productivity and efficient buildings Chair – Stefan Preuss , Associate Victorian Government Architect, Office of the Victorian Government Architect A/Prof Adrian Barnett , Senior Research Fellow, Queensland University Prof Per Heiselberg , Division of Architectural Engineering, Department of Civil Engineering, Aalborg University Glenn Byres , Chief of Policy and Housing, Property Council of Australia Joann Wilkie , General Manager, Energy Productivity Branch, Department of Environment and Energy Designing, retrofitting and operating buildings to save energy can also deliver significant health and productivity benefits. This session will bring together building owners and experts to look at how the 'side benefits' of energy efficiency could become the major driver for sustainable cities.		
10.30am	Morning tea (served in Exhibition Hall)		
11.00am	COMMERCIAL STREAM Deep retrofits & zero carbon targets (Room – Dining Room) Chair – Shauna Coffey , Head of Projects, Energy Efficiency Council Francesca Muskovic , National Policy Manager – Sustainability and Regulatory Affairs, Property Council of Australia Chris Derksema , Sustainability Director, City of Sydney Nina James , General Manager, Corporate Sustainability, Investa Dr Alexander Zhivov , Energy Branch US Army Corps of Engineers, ERDC – CERL Rory Lonergan , Director, Corporate and Project Finance, Clean Energy Finance Corporation What do aggressive targets for 'zero carbon' cities mean for our existing buildings, and what is the role of retrofitting in this pathway?	INDUSTRIAL STREAM Is there a future for manufacturing? (Room – 6A) Chair – Rob Murray-Leach , Head of Policy, Energy Efficiency Council Jennifer Conley , Executive Director, Australian Advanced Manufacturing Council Tom Yankos , Business Analyst, ClimateWorks Hakan Ozelik , Portfolio Development Manager – Digital Enterprise, Siemens Australian manufacturing is changing dramatically, as some sectors wind down and others emerge. What does the future hold, and what are the impacts of digitalisation, automation and energy productivity?	RESIDENTIAL STREAM Homes for hot weather (Room – 6B) Chair – Dr Cheryl Desha , Head of Environmental Systems Discipline, Queensland University of Technology Prof Carsten Rode , Department of Civil Engineering, Technical University of Denmark Alan Pears , Senior Industry Fellow, RMIT University of Technology Jodie Pipkorn , A/g Manager, Residential Buildings Team, Department of the Environment and Energy While building standards have delivered homes that are more efficient in winter, they often perform poorly in hot weather. How can we create low-energy homes that are comfortable in higher temperatures?
12.30pm	Lunch (served in Exhibition Hall)		
12.45pm	Lunchtime briefing: NSW Government's Draft Plan to Save Energy and Money (Room – Dining Room)		

Energy Management for Facility Managers (Room – 7ABC)*

* Separate registration is required for these Masterclasses.

Program 2016


Wednesday 16 November

1.30pm	Commercial building standards (Room – Dining Room) Chair – Tony Arnel , President, Energy Efficiency Council Dr Peter Wouters , Director Development and Valorisation, Belgian Building Research Institute Dr Takao Sawachi , Director of Housing Department, National Institute for Land and Infrastructure Management Neil Savery , General Manager, Australian Building Codes Board Chris Nunn , Head of Sustainability, Property, AMP Capital There is a crucial role for building standards in any zero-carbon future. What do standards need to be and how should they be applied for maximum beneficial effect?	Industrial efficiency interactive session (Room – 6A) Chair – Rob Murray-Leach , Head of Policy, Energy Efficiency Council Dr Brian Motherway , Head of Energy Efficiency, International Energy Agency (IEA) Patrick Crittenden , Director, Sustainable Business Pty Ltd Samuel Redmond , Head of Business Development, Greener Earth Energy Ltd Alan Pears , Senior Industry Fellow, RMIT University of Technology This interactive session will explore which policies are really needed to drive industrial efficiency.	Energy efficiency ratings for homes (Room – 6B) Chair – Lauren Solomon , Manager, Consumer Policy and Programs, AGL Emily Yip , Senior Team Leader – Sustainable Households, NSW Office of Environment and Heritage Paul Murfitt , Director, Energy Efficiency, Energy, Environment & Climate Change, Department of Environment, Land, Water and Planning Jesse Clarke , Building Scientist, CSR Building Products Limited Dr Ian Hamilton , Lecturer, UCL Energy Institute, University College London Governments are considering energy efficiency ratings for new and existing homes. This session will look at the key issues for home ratings and the likely impact on the energy efficiency sector.
3.00pm	Afternoon tea (served in Exhibition Hall)		
3.30pm	Future focus: Innovation in new products and markets Chair – Kylie Hargreaves , Deputy Secretary, Resources, Energy & Lands, NSW Department of Industry Dr Mark Bonnar , Managing Director, Southern Cross Venture Partners Jayaraman Balachandar , Head of Building Performance and Sustainability, Building Technologies – Middle Asia Pacific, Siemens Nick Carter , Business Development – C&I Customers, Tesla Innovating new products and services will be critical to grow and thrive in both global and domestic energy efficiency markets. The closing session will look to the future and ask how Australian companies can become leading innovators.		
4.20pm	Closing comments Luke Menzel , Chief Executive Officer, Energy Efficiency Council		
4.30pm	Networking drinks (served in Exhibition Hall)		
5.00pm	Conference close		

Energy Management for Facility Managers (Room – 7ABC)*



* Separate registration is required for these Masterclasses.



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Energy efficiency in Australia: A year in review

The Energy Efficiency Council's CEO Luke Menzel reflects on a big year for the sector.

The National Energy Efficiency Conference has grown a lot since its inaugural outing in 2009. It has become a major fixture for the energy sector. And this year's Conference, our eighth, is bigger, more comprehensive and international than ever before.

This growth reflects the evolution that has taken place both in the Energy Efficiency Council (EEC) and Australia's energy efficiency sector more broadly. The EEC and its members have grown in size and influence, and that has enabled us to do more to build the sector, cut emissions and grow the economy.

Energy efficiency is now at the heart of the energy debate, and new policies and programs focused on unlocking the energy efficiency opportunity are emerging on a regular basis.

Energy Efficiency Council – firing on all cylinders

I worked with the Board to restructure the EEC in 2015. That effort has borne fruit in 2016, allowing us to redouble our focus on growing the sector and creating opportunities for members.

In 2016 we added two new staff to the team – Daniela Vrljic, Executive Events and Communications and John Allie, Manager Partnerships and Member Services. Daniela is building the EEC's range of events and raising the profile of energy efficiency in the media. John is working with members to create new services to help members achieve their organisational objectives.



Dedicated events, communications and membership staff has freed up time of the existing team, boosting our capacity in policy, projects, training and certification. We've ramped up our output, including working with governments and other partners on major reports and releasing the *Australian Energy Efficiency Policy Handbook*.

I'm proud to lead a formidable team that is working hard to ensure the EEC is providing value to members, day in and day out.

Driving the energy efficiency conversation

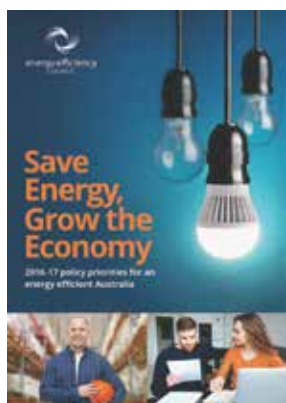
The EEC has had a major impact on the policy landscape in the last year, ensuring that energy efficiency has a voice in critical debates.

Over the course of 2016 we've met with key politicians in Canberra, NSW, Victoria, South Australia, Queensland and Western Australia, and represented members at the bi-annual meeting of all Australia's energy ministers.

We also met with the Australian Government's Finkel Review – convened after the blackout in South Australia – and have commissioned a new report for the Review that covers how demand-management can improve energy security.

But importantly, the Council isn't just responding to debates – we're shaping the conversation. In July, the Energy Efficiency Council launched the first edition of the *Australian Energy Efficiency Policy Handbook*. The *Handbook* provides state and federal governments with a detailed plan to boost energy efficiency.

At a time of significant volatility in energy policy, a clear and consistent voice for energy efficiency is more critical than ever.



A dynamic policy landscape

The landscape around energy efficiency policy and programs is shifting quickly. In particular, states and territories are making major efforts on energy efficiency because they know it's critical to affordability and competitiveness.

The NSW Government was already the national leader in energy efficiency policy and programs. Now they are building on that strong foundation with their world class *Draft Plan to Save NSW Energy and Money*. The \$200 million strategy adopts many of the recommendations set out in the Council's *Australian Energy Efficiency Policy Handbook*, and we're looking forward to working with the NSW Government as they consult on and implement their *Draft Plan*.

The Victorian Government is also about to release their new Energy Efficiency and Productivity Strategy, and is putting serious effort into their *Residential Efficiency Scorecard*. The ACT and South Australian governments are continuing to enhance their energy programs.

We've worked closely with governments to introduce effective energy efficiency programs. The reintroduction of the Greener Government Buildings program in Victoria in September was a major step forward. For the first time, we now have programs in place in NSW, South Australia and Victoria, which brings a new level of stability to this important market.

Energy efficiency schemes underpin our industry. The EEC fought hard for the retention of the Victorian Energy Efficiency Target, and over the last year we've worked with governments in Victoria, NSW, South Australia and the ACT that are committed to improve and harmonise these schemes.

Nationally, the Commercial Building Disclosure program has been critical for driving up efficiency in office buildings, and we are delighted that the Australian Government adopted our recommendation to retain and expand the program.

The Council of Australian Governments (COAG) Energy Council signed off on a new National Energy Productivity Plan (NEPP) immediately after our 2015 Conference. The NEPP is an important framework document that sets a target to improve energy productivity by 40 per cent by 2030. We now need to develop the policies and programs that will ensure we meet our NEPP target.

We also need to reinforce the critical role of energy efficiency in dealing with climate change. The International Energy Agency has noted that governments around the world need to do much more if they are going to meet their commitments under the Paris Climate Agreement. Heading into the Australian Government's 2017 climate change review, we will be working to ensure energy efficiency is a central part of the conversation.

Looking ahead

Momentum is building and the opportunities are huge. However, as a sector we know that energy efficiency doesn't happen by itself. It requires ongoing focus, clarity of intent and – above all – follow through. That's why a strong, dedicated voice for Australia's energy efficiency sector is so important.

If you are a member of the Council, thanks for your ongoing support. If you aren't yet, I encourage you to consider coming on board.

I'm looking forward working with you to create a more energy efficient Australia.

Luke Menzel
CEO, Energy Efficiency Council

Acknowledgements

The Energy Efficiency Council (EEC) extends warm thanks to the many individuals and organisations who have helped make the National Energy Efficiency Conference 2016 Australia's premier event for energy efficiency, cogeneration and demand management.



Special thanks to the IEA's Energy in Buildings and Communities Programme. **Andreas Eckmanns** (Chair), **Malcolm Orme** (Secretary) and the rest of the IEA EBC's Executive Committee who have helped bring a truly global perspective to this year's Conference.

Thanks too to the many **local and international experts** who have contributed to shaping a compelling Conference program.

Our Conference is being held on the traditional lands of the Gadigal people of the Eora Nation and we wish to acknowledge them as Traditional Owners of this land and pay our respects to their Elders, past and present.

The National Energy Efficiency Conference 2017 will take place in Melbourne.

Dates will be announced soon. We look forward to seeing you there!

We would also like to thank:

All **speakers, session chairs and panellists** who have freely contributed their time and expertise to ensure the Conference program is challenging, informative and reflects the big issues currently facing the sector.



The **NSW Office of Environment & Heritage** who have made a significant contribution, as Major Partner, to the development of quality content for the Conference program, and whose leadership in energy efficiency is driving the Australian energy efficiency sector forward.

All our sponsors, whose vision, leadership and support makes this Conference possible: **Department of Environment, Land, Water and Planning, Energy & Carbon Solutions, Siemens, Department of Environment and Energy, Vivid Industrial & Vivid Illumalite, Clean Energy Finance Corporation, Standards Australia, Aeroseal Duct Sealing, CRC for Low Carbon Living, Optimal, Energetic Lighting and our media partners EcoGeneration and The Fifth Estate.**

The National Energy Efficiency Awards 2016

Judging Panel: Matthew Clark (Common Capital – Panel Chair), Alan Pears (RMIT), Phil Harrington (pitt&sherry), Cheryl Desha (Queensland University of Technology), Jonathan Wood (Crown Resorts & Energy Users Association of Australia), Rob Murray-Leach (Energy Efficiency Council), Shauna Coffey (Energy Efficiency Council – Commercial Buildings category).

All **Energy Efficiency Council Members** whose ongoing support and input enables the Council to work towards its goals of establishing energy efficiency as the pre-eminent measure for carbon mitigation, building the market for energy efficiency products and services, and ensuring that energy efficiency is implemented with excellence and accountability.

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

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