



CLIMATE AND HEALTH ALLIANCE

Report: Healthcare Environmental Sustainability Forum 2017

The Healthcare Environmental Sustainability Forum was held on 1 and 2 June 2017 at the Western Centre for Health and Research Education within Western Health in Melbourne.

The Climate and Health Alliance partnered with Western Health (WH) and the Institute of Healthcare Engineering Australia (IHEA) to deliver the forum, with support from the Australian Hospitals and Healthcare Association (AHHA). WH, IHEA and AHHA are all members of the **Global Green and Healthy Hospitals** network.

Valuable sponsorship was provided by GreenLand Systems and Daniels Healthcare.

Over 50 people attended the forum each day and included people from diverse health and environmental sustainability backgrounds including nurses, orderlies, doctors, sustainability officers and managers, building and maintenance staff, state government representatives, social workers, supplier representatives, industry consultants, health promotion staff, business development staff, food services staff, and more.

Copies of the speaker's slides are available here: http://www.caha.org.au/globalgreen_healthyhospitals

DAY ONE— Forewarned is forearmed: planning for energy price hikes and market instability

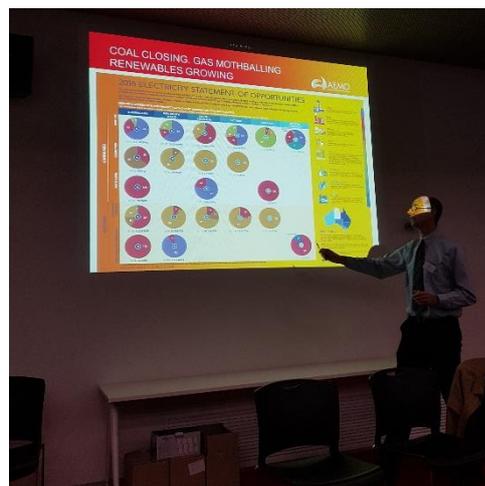
Russell Harris, acting chief executive officer (CEO) of Western Health welcomed attendees and announced the 2017 winner of Western Health's inaugural Green Ward competition as Grace Wong, for her environmental sustainability efforts in the pharmacy department.

Keynote speaker **Ben Skinner** from Australian Energy Market Operator (AEMO) spoke about the Australian electricity and gas markets, focusing particularly on:

- the structure of wholesale and retail markets;
- changes in supply and demand and in the markets themselves; and
- insights on energy production and costs in the short and long term.

Points of interest include: that approximately 6,000 MW of additional wind and solar farms are likely to be connected by 2021; that the AEMO is seeking extra reserves for summer 2017/2018 and will pay large energy users who have the ability to reduce their consumption on hot days; and that one potential option for dealing with short term gas shortfalls is to invest in alternative electricity generation and storage technologies.

Tiernan Humphrys, Manager Environmental Sustainability at Department of Health and Human Services (DHHS), spoke about the Victorian Government's initiatives to achieve net zero emissions by 2050 as outlined in the Climate Change Act including: the Greener Government Buildings (GGB) program; Bulk procurement of solar panels which DHHS and Health Purchasing Victoria (HPV) are currently working on; and the new NABERS for Hospitals tool, which is presently focused on energy and



Ben Skinner, AEMO

water and will be used to award NABERS ratings to all hospitals in Victoria in the next few months. He also spoke about options for health systems to finance energy efficiency initiatives, either through taking a Treasury loan from the GGB program, or self-financing by the health system itself.

Craig Marshall, Project Manager from Focus Energy Solutions presented on building commissioning, energy efficiency and building automation systems. He demonstrated how building commissioning investigations can identify areas of improvement which, once addressed, could save energy, reduce operating costs, improve comfort and manage risk. He also gave some practical examples of how measuring and monitoring can improve energy efficiency of buildings.

Andrew Ostoja, National Operations Manager at Ecosave Consulting, highlighted issues that can arise from installing renewable energy systems without appropriate planning, explained the requirements involved in installing larger (30 MW and 100+ MW) renewable energy systems, and demonstrated the opportunities and challenges of a number of alternate power generation and storage options for hospitals.

Andrew Pintar, Corporate Operations Manager from GreenLand Systems, demonstrated how solar thermal equipment, system control and thermal energy storage solutions can lower operating costs and displace fossil fuels required for heating, hot water and cooling. He shared information on how solar thermal technology is evolving to become increasingly more efficient, presented examples of solar thermal installations and highlighted the advantages of using solar thermal systems in constrained spaces.

Emma Jacobs, VEET Manager from the Department of Environment Land Water and Planning, outlined which products the VEET covers in hospitals, and questions to ask when receiving quotes from VEET accredited providers. She explained recent changes to the VEET scheme that now means project-based activities, with appropriate measurement and verification in place, may be able to access incentives to help offset the cost of energy efficiency improvements. Read more about project-based activities [here](#) and [here](#).

Richard Keech, from Beyond Zero Emissions began with a reminder of why we need to stop emitting GHGs as soon as possible, explained that gas is not a low-emission energy source, and expounded concerns about the under reporting of GHG emissions resulting from gas leakage. He presented alternate options for using gas in hospitals, by combining renewable electricity generation (e.g. through onsite generation or power purchasing agreements) with electrification of hospital energy (e.g. using heat pumps for heating, hot water and cooling).

In the afternoon, each of these speakers (except for Russell Harris and Emma Jacobs) took part in a panel discussion on rising energy prices, energy supply volatility and energy efficiency. The discussion was facilitated by Mark Hooper, Echuca Regional Health's executive project manager. Discussion topics included challenges the electricity network is facing in dealing with a devolved electricity supply from increased renewable electricity generation, issues around maximum demand charges in off-peak periods, and the potential for solar thermal collectors to be combined with heat pumps and solar PV to eliminate reliance on fossil fuels in hospitals.

DAY TWO — Local action: environmental change and the healthcare environment

Fiona Armstrong Executive Director of CAHA began day two with an overview of the Climate and Health Alliance's campaign for a National Strategy on Climate, Health and Wellbeing.

Carol Behne CAHA's sustainable healthcare project officer spoke about the Global Green and Healthy Hospital (GGHH) highlighting member achievements, membership benefits, and how to join the network.

Scott Slotterback GGHH Policy Director from Health Care Without Harm (HCWH), presented multiple case studies from GGHH members around the world, highlighting leading examples of GGHH members who are reducing their GHG emissions and improving their resilience in the face of a changing climate.

Catherine O'Shea, Sustainability Officer at Western Health shared details of Western Health's environmental sustainability journey to date, including their achievements in improving environmental sustainability in each of the 10 GGHH goal areas, and their Environmental Management Roadmap 2015 - 2020. She outlined Western Health's strategy to use *Local Sustainability Action Plans* in Departments and *Local Clinical Action Plans* in clinical areas. An approach that combines employees 'local knowledge', with research and support from the sustainability officer, to develop plans aimed at improving environmental outcomes for the whole of Western Health.

Environmental Research Presentations:

Dr Forbes McGain and Ron Lau from Western Health presented research findings on:

- The Environmental Footprint of Morphine
- The Environmental Footprint of Septic Shock Patients in the ICU
- The Financial and Environmental Costs of Reusable and Single Use Anaesthetic Equipment (time constraints meant this research wasn't presented – however slides are available [here](#))

Global Green and Healthy Hospital member case study presentations:

Ngairé McGaw, Sustainability Officer at Mater Health Services in Brisbane presented a case study on [Space for Waste](#) and steps towards sustainable clinical models. She also provided links for more information on this new building, e.g. [a Youtube video on the technology and master plan](#), and [the healing garden](#).

Frank Megans, CEO of Kooweerup Regional Health Service outlined how KRHS came to prioritise environmental sustainability and implement a socio-ecological approach to health in his presentation on Green Sustainable Futures - a Small Rural Health Service Approach. Their achievements led them to win GGHH's annual 2020 Challenge Climate Champion Awards in 2016, taking Gold in Climate Leadership ([case study](#)) and Silver in Climate Resiliency ([case study](#)).

Anthea White, Satellite Dialysis Manager at Coburg Dialysis Unit (Melbourne Health) demonstrated how their unit has reduced clinical waste by 33% per dialysis treatment through a presentation on [Sustainability Initiatives at Coburg Dialysis Unit, Melbourne Health](#).

Grace Wong, a Pharmacist at Western Health demonstrated how their department developed a Local Sustainability Action Plan to Green Their Pharmacy. She shared insights into their progress in including environmental criteria into supplier tender documents, and their efforts to reduce returned medications from the ward. Grace is founder of Pharmacists for the Environment Australia ([Facebook page](#)).



Anthea White, Melbourne Health

Behaviour change for environmental sustainability:



Mark Boulet, BehaviourWorks

Mark Boulet, Research Fellow from BehaviourWorks Australia began by highlighting that behaviour is observable, and that influencing behaviour is more complex than just giving people knowledge, in the hope it will change their attitude, and lead to a change in their behaviour. He introduced some of the many conscious and unconscious factors that can influence a person's behaviour.

He suggested following the process below:

- Explore the problem;
- Investigate behaviours in depth (including engaging with the target population as what influences *them* may not be what *you* think it will be);
- Design a behaviour change program based on your findings;
- Test it.

The forum concluded with a panel discussion on the challenges of packaging, syringes and single use items with regards waste minimisation. Panel participants included:

- Trevor Thornton, Infection Prevention Consultant
- Anthea White, Coburg Dialysis Unit Manager, Melbourne Health
- Bradley Keam, Sustainability Manager from Baxter
- Shahbaz Aftab and Deanna Fong, Environmental Protection Authority Victoria
- Sarah Bending, Department of Health and Human Services Victoria
- Richard Bartolo, Infection Prevention, Western Health
- Facilitated by Forbes McGain, Anaesthetists, Western Health

A snapshot of the discussion topics include:

- The difficulties appropriately disposing items that are classified as regulated waste, but no longer need to be;
- That it is still possible to provide input into the EPA's Industrial Waste resources regulatory review. To do so email waste.regulations@epa.vic.gov.au. The review will remain open until the end of the regulatory review. The earlier input is received in the regulatory review process, the more opportunity there is to help shape the regulations. When the regulatory impact statement is released towards the later part of 2018, there will be a 'formal' opportunity to send in a submission. The EPA have said that they are happy to present to and/or meet any group who are keen to hear more about the regulatory review.
- EPA Victoria representatives said that it was possible to complete an application form to request removal of items from the Prescribed Industrial Waste (PIW) Guidelines (for example for 5L chemical containers; syringes; and glass pharmaceutical vials). The location of this form is yet to be confirmed with EPA.
- That the 'customer has the power' when it comes to asking for products with greater environmental performance, and that healthcare should leverage this. When Baxter representatives heard that 'nurses hated using their products', they changed their products to be more suitable. They want to supply products their customers want to use.
- That there needs to be someone who manages the many relationships involved in waste and recycling programs (such as environmental services staff, ward staff, infection control, facilities management, suppliers, waste contractors) to ensure all areas are working in unison, identify issues and address them.
- There are challenges of working in PPPs when cleaning staff are outsourced as there is limited control to influence external staff behaviour. Also, that these staff are often on low wages with limited support, raising issues of equity.
- Infection prevention and environmental sustainability goals can often be at odds, however it is possible to work together on projects to ensure both parties are satisfied.

Thank you to our partners, sponsors, speakers, volunteers and everyone who attended, for your valuable contributions.

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