Transition Towards 100% Renewable Energy

Congress Chairman – Professor Ali Sayigh, DG of WREN - UK
Vice Chairman – Professor Martin Anda – Murdoch University – Australia
Among the Sponsors:
The World Renewable Energy Conference XVI was held on 5-9 February on the beautiful campus of Murdoch University, just outside of Perth in the coastal town of Fremantle, Western Australia. The Congress, with a theme of “Transition Towards 100% Renewable Energy”, featured keynote speakers and parallel technical sessions highlighting technical, policy, and investment progress towards achieving 100% renewable energy ranging in scale from households to cities to large regions, with a focus on the challenges and opportunities in transforming the global energy system. Over 330 attendees representing more than 33 countries participated, with nearly 200 technical oral presentations and posters.

The Congress began with a Sunday evening “Public Meeting” at Victoria Hall in downtown Fremantle. The Mayor of Fremantle, Dr Brad Pettitt, hosted the event, and four well known persons spoke on the successful global growth of renewable programs, as well as specific activities within Australia. David Renne, Ali Sayigh, Peter Neumann (Curtin University) and Ray Wills (Future Smart Strategies) spoke, generating considerable dialogue and feedback from the nearly 200 people packed into the century-old meetinghouse. Many of the participants were either from the surrounding area, or registrants of the Conference.

On Saturday evening a welcome dinner was hosted by Prof Martin Anda and Dr Mathew for some of the key speakers at the Sunday “Public Meeting”.

The Congress Started on Monday 6 February with the following speakers:

**Chair**: Dr Martin Anda, *Chair of Environmental Engineering, Murdoch University*. Welcome to Country: *Mrs Marie Taylor, Aboriginal Noongar Elder.*
Welcome from Prof Bogdan Dlugogorski, Dean of the School of Engineering & Information Technology, Murdoch University.
Welcome from Murdoch University: *Prof Eeva Leinonen, Vice Chancellor, Murdoch University.*
Welcome from WREN: *Prof Ali Sayigh, Director General, World Renewable Energy Network*

Inaugural Speech: *Mr Matt Taylor MLA, Parliamentary Secretary to the Minister for State Development, Transport and Innovation*
Speakers at the Congress Opening

The opening took place at the main theatre, Murdoch University.
Several speakers gave their presentation that Monday among them
Dr David Renne – USA       Prof Peter Neumann- Australia       Prof Abu Bakr Sambo-Nigeria

Dr Renne described the Australian drive towards renewable energy as a necessity for the future development of Australia based on the present climate change situation, he said:

“ This Conference occurs at a time when the global political situation seems to be going through a significant transformation, pulled by forces that are exemplified by increasing divisiveness within societies, especially in the developed world. One side of this divide is reacting against a globalized economy that results in jobs moving out of their country at the same time that massive migration is overwhelming their societies in ways that creates ever-increasing income and wealth disparity. The other side of the divide favours even more, expanded globalization, arguing that this is the best way to distribute wealth and improve the opportunities of moderate-income segments for everyone. To me it is interesting how the growth of renewable energy can get caught up in these arguments. Those arguing that globalization has hurt jobs and middle class incomes in their countries also argue that replacing fossil with renewable energy will only contribute to the social dysfunction, since renewables are upending traditional fossil-based economies.

In reality, however, the growth of a renewable energy economy transcends this argument, by contributing to energy security by using local energy resources, by contributing to economic security; by replacing dangerous and unhealthy fossil extraction jobs with high-paying jobs in the manufacturing, operation, and maintenance of renewable energy systems and by contributing to environmental security through the reduction of deadly indoor and urban air pollution and dangerous climate change. Because of their modularity, renewable technologies can provide quick (and now low-cost) additions to energy system capacities, rather than waiting for many years to go through regulatory and safety reviews required in order to build traditional large, centralized generating facilities. Because renewable technologies are, by their nature, distributed technologies, they can be used more and more to optimize energy systems and ensure that local resources are used to meet local load demands without continually having to add to and upgrade long-distance transmission systems. Renewable energy systems are ideal for giving people more choice in their own energy services, rather than being necessarily dependent on large, remote utility systems.

These points were made continually and in various ways at the WREC XVI at Murdoch University. For example, Peter Neumann demonstrated how modern economies can work well with reduced dependence on fossils, and that we are seeing a “decoupling” of wealth from fossils. Many difficulties remain in these economies in getting this wealth redistributed, but the
fact remains that recent renewable energy investments are more than double fossil investments, and many investors are choosing a path of “disinvesting” from fossil extraction technologies.”

After the opening ceremony and in the coffee break the Exhibition opening took place, and Poster Presentations were made in the ECL Atrium. Participants were then addressed by Hon. Francis Michael Logan MLA, Shadow Minister for Housing; Local Jobs; Training and Workforce Development. Among the exhibitors was Springer publishing company which is in charge of the Congress proceedings.

On Monday evening, as is usual in all our Congresses, WREN dinner took place at Fremantle Hotel for 30 speakers and WREN Council Members.

Member of WREN Council & some of the speakers at WREN Dinner

Springer Book Exhibition
On Tuesday and Wednesday, there were 9-plenary sessions, 5-parallel sessions every day and one major poster session. Among the speakers were:

Dr Monica Oliphant
Prof Helmut Muller
Dr Arifeen WAHED

Dr Josh Byrne
Mr Frank Tudor
Ms Jemma Green

Mr Furat Dawood
Dr Vanessa Roulant
Dr Sangita Bista

Prof Wasim Saman
Mr Colin Mallett
Dr Tao MA
Ms Gazinga Abdullah
On Tuesday evening the Congress Gala Dinner was held at the Fremantle Sailing Club. Prior to the dinner two technical visits were arranged, one to a zero energy house and another was to a waste to energy station. The Gala Dinner was sponsored by Ecotect Architecture – Arch. Garry F Baverstock was presented with a Kaz Solar Tie. Prof Sayigh presented three more awards: to Rt Hon Lynn Maclaren –member for the South Metropolitan Region Legislative Council, Western Australia; to Dr Kuruvilla Mathew, the main planner and organizer of the Congress; and to Dr David Goodfield the main Congress Secretary.

After the dinner a group photograph was taken inside Fremantle Sailing Club.

The closing ceremony was at 18:40 on Wednesday and the Co-Chairman of the Congress Prof Martin Anda read the recommendations:

Proposed Conference Statement

The theme of the Conference was the Transition to 100% Renewable Energy.

The Conference was attended by 310 delegates from 30 different countries and 165 oral presentations and 45 posters were presented.

The Conference delegates noted that:

1. Climate change is happening now and is already affecting the health and welfare of communities and ecosystems across the globe.
2. Some areas such as small island states and semi-arid regions are highly vulnerable to the effects of climate change.
3. Renewable energy offers a solution to the problem of global warming, which is driving climate change.
4. A global transition to renewable energy is underway but it needs to be accelerated to avoid severe impacts from climate change.
5. In making this transition to a zero carbon economy we need to provide support and assistance to those people and sectors of the community that were previously reliant on fossil fuels for their income.

The World Renewable Energy Conference 2017 therefore resolved:

1. To call upon the Australian and Western Australian Governments to:
   a. Support an accelerated transition to a renewable energy economy by establishing meaningful Renewable Energy Targets for both the stationary and transport energy sectors. The suggested targets for stationary energy are 30% by 2020 and 100% by 2040 and for transport energy 30% by 2030 and 100% from renewables by 2050.
   b. Conduct an inquiry into subsidies for fossil fuels and barriers to the use of renewable energy, with the aim of phasing out these subsidies and removing the barriers to renewables before 2020.
   c. Develop a renewable energy strategy to guide the transition to 100% renewable energy. The strategy to include measures to phase out fossil fuel generators and measures to assist workers affected by the phase out of fossil fuels.
   d. Develop a balanced policy framework with harmonisation between state and federal energy agencies, greater transparency across agency activities and information; and clear linkages between the energy sector and climate change policy.
2. To approach the WREN Secretariat with a view to holding another Conference in Perth in 2021.
3. To thank Murdoch University for hosting this Conference and Dr Kuruvilla Mathew and his team for organizing the program.

Prof Sayigh gave a speech thanking H E Dr Abdulaziz bin Othman Altwaijri Director General of ISESCO for his support of clean energy and renewable energy and for the contribution to help scientists from ISESCO Countries to attend the Congress. He also thanked all the sponsors as well as the three pillars of the Congress: Prof Anda, Dr Mathew and Dr Goodfield. He thanked the University of Murdoch and all students and registration staff for their support and hard work. The Mayor of Fremantle and all the exhibitors were thanked for their contribution to the success of the Congress. And lastly he extended thanks to all the participants many of whom had travelled long distances to present their excellent papers. Finally, he announced that the proceedings would be published by Springer and 40 papers would be selected by the Technical Committee for publication in the by open access journal of Renewable Energy and Environmental Sustainability of which he is the Editor-in-chief.
A group photograph was taken at the closing ceremony

On Thursday 9 February a day trip was organized by the Congress to visit the nearby Island of Rottnest. The Island is a National Trust employing 150 persons and its electricity is totally supplied by PV and Biomass.

Some of the participant are preparing to go into the boat trip to the Island of Rottnest

At the Island an hour lecture was given to the participants, then they were divided into two group to visit the two renewable energy sites.

At the Island Hall, the participants listened to a lecture about the Rottnest and its electricity supply