



## FACING OUR FUTURE

### *The Challenge of Water & Energy*

**Wednesday 14 January 2009**  
**Los Angeles, California**

#### **INTRODUCTION**

As part of the annual Australia Week program of events, the Australian Consulate-General in Los Angeles organises a major policy-focused event which links both Australia and the United States and gives exposure to policy discussions which are on the global stage. The audience includes senior political, business, academic, media and diplomatic leaders from across the United States and Australia.

In 2009, Australia Week will host a symposium titled **Facing our Future - The Challenge of Water and Energy**, with a focus on the growing importance and value of water both as a consumable resource that is essential to sustained life, and as a renewable energy source. The symposium will address issues of water stress relevant to Australia and the United States, and will consider possible methods and policies that can be implemented to improve the practices of water conservation and management. Experts will also hypothesise on the critical effects that global climate change will have on water supplies. The symposium will analyse the potential of water as a renewable energy source that is capable of reducing society's dependence on fossil fuels. Finally, the symposium will also discuss the development of solar, hydro, geothermal, tidal and wind energy which all offer promising prospects at a cleaner future, and ways to accelerate their implementation.

#### **LOCATION & LOGISTICS**

The symposium will be held at the InterContinental Los Angeles/Century City. Registration will begin at 8am, and a continental breakfast will be served, providing guests an opportunity to network. The day will begin with welcoming remarks from the Consul-General. Five panels will then follow, each formed by a diverse group of experts who specialise in fields relevant to water and energy. The panel discussions will be led by a moderator, who will direct probing questions at the expert panellists. Running concurrently with the panel discussions, exhibitors from Australia and the United States will be hosting displays of cutting edge research, innovative technologies, and best practice policies that provide tangible examples of effective ways to maximise the value and power of water and produce energy. The morning session will conclude with a luncheon featuring keynote speeches by senior political leaders from Australia and the United States.

After the luncheon, there will be a final panel made up of private sector, city, State and federal government experts on clean energy technologies. The discussions will focus will be on the needs and opportunities in the marketplace for alternative, and sustainable energy technologies.

The symposium will conclude with an opportunity for attendees to have one-on-one discussions with each of the Australian suppliers to more clearly define their capabilities and develop business relationships.

## **PANEL OVERVIEWS**

Five panels will present sector-specific ideas and opinions on topics relevant to the modern-day challenges of water and energy. The panels, in order of presentation, are:

1. Water Stress/Water Conservation and Management
2. Water and Climate Change
3. Water and Energy
4. Energy Generation and Renewable Energy
5. Needs and Opportunities for Clean Technologies

### **Panel I – Water Stress/ Water Conservation & Management**

Water stress applies to situations where there is not enough water for all uses, whether agricultural, industrial, domestic or otherwise. Water scarcity hampers economic development, impacts on human health and well-being, and even has the potential to cause local or international conflict. Factors influencing water stress include population growth, increased affluence, expansion of business activity, rapid urbanisation, depletion of aquifers and pollution. Less than 2.5 percent of the water on earth is fresh water, and only a small fraction of this is present above the ground or in the air. Water demand already exceeds supply in many parts of the world, and as populations continue to rise, many areas are expected to experience water stress. Australia is the driest continent on earth and faces the threat of acute water shortages in cities and regional areas. The United States, while having greater access to fresh water, also faces water stress in the form of polluted water supplies. Recent concerns have been raised throughout the United States regarding the high levels of pharmaceuticals found in drinking water. The Water Stress Panel will examine the current supply and demand equation for freshwater and will consider the many factors that contribute to water stress. The panel will propose methods and policies for increased water accumulation, and will make suggestions for relieving the strain on available water supplies. The panel will also consider the global responsibility of Australia and the United States, as wealthy developed countries, to assist those in poorer regions, where water shortages are more prevalent and damaging, such as the Middle East, Africa, and parts of Asia. At Earth Summit 2002, governments approved a Plan of Action to halve, by 2015, the proportion of people unable to reach or afford safe drinking water – much progress need be made before this goal is in sight.

Water conservation refers to reducing the use of fresh water, whether through technological, social or other methods. The primary goal of water conservation is to ensure the sustainability of water supplies for the use of future generations. In practice, this means that the withdrawal of fresh water from an ecosystem should not exceed its natural replacement rate. Secondary goals of water conservation include reducing the amount of energy that is devoted to water management. In California, for example, over 15 per cent of total electricity consumption is devoted to water management. Finally, water conservation efforts are necessary to protect natural habitats and ecosystems from damage caused by human water use. Water management is inherently related to water conservation, and concerns the practices of planning, developing, distributing, and optimising the utilisation of water resources under defined water policies and regulations. This may include the treatment of drinking water, industrial water, sewage or wastewater; the management of available water resources; the management of flood protection; and the management of irrigation.

In both Australia and the United States, where demand for clean and accessible drinking water is high, efficient management of water resources is crucial. The Water Conservation and Management Panel will discuss best practices for water conservation and management, and will specifically address the economic considerations that inevitably arise when addressing such issues.

## **Panel II – Water & Climate Change**

There is arguably no greater challenge currently facing our world than dangerous climate change. Climate change is predicted to have significant impacts on water resources around the world because of the close connections between the climate and hydrologic cycle. Australia and the United States are both exposed to suffer the impacts of climate change as a result of their finely balanced natural environments and large resources and energy sectors. As climate change intensifies, Australia, in particular, faces increasingly acute long-term water shortages in cities and regional areas – with lower rainfall, rivers drying up and dam water levels falling. Yet both Australia and the United States also have the potential to become world leaders in the fast-growing technologies and industries that will enable economies to reduce their carbon emissions and stem the damage caused by climate change. The Water and Climate Change Panel will consider the impact that climate change may have on world water resources, and will suggest policies and innovations that Australia and the United States may utilise to allay potential damage.

## **Panel III – Water & Energy**

Reducing greenhouse gas emissions is one of the major challenges in tackling climate change, and the power of water offers a viable solution. Hydropower, or hydraulic power, is the force of moving water, which may be captured as transferable energy. It is a renewable source of energy, and produces no waste; however, hydropower infrastructure has been criticised for altering natural environments. Hydroelectricity is the largest use of hydropower and now supplies approximately 20 per cent of global electricity and accounts for over 60 per cent of total electricity from renewables. The Australian Government is implementing a 20 per cent Renewable Energy Target for Australia to reach by 2020 – by this date it is hoped that renewable energy sources will produce enough energy to meet the needs of all Australian households. The use of hydropower will be critical to reaching this target. The United States Government has also identified hydropower as an important energy source with significant growth potential, and California is the second highest producer of hydropower in the country. The Water and Energy Panel will consider the power of water as a renewable energy source. Included in the panel's discussion will be an assessment of the viability of widespread implementation of hydropower infrastructure, based on a cost-benefit analysis.

## **Panel IV – Energy Generation & Renewable Energy**

The transition from a fossil fuel-based economy to a more stable renewable source of energy will require the collaboration of government, science, business, and consumers. This panel will focus on alternatives to fossil fuels, and what obstacles such opportunities must overcome in order to become viable and profitable. In many cases, the necessary technologies are available but they do not exist in a state that can be produced large-scale. A major concern is that these technologies must be profitable if business and government are to be successful in implementing them in a way that can effectively combat climate change. The development of solar, hydro, geothermal, tidal and wind energy all offer promising prospects at a cleaner future, and the panel will discuss ways to accelerate their implementation and revolutionise the way the global community powers itself. A study of best practices will also be a central part of this panel, with an exploration of current renewable energy projects and how they can be applied in other regions of the world to expand the scope of their significance. Examples of this can be found in the cooperative work of the Asia Pacific Economic Corporation and the AP6 task forces. Collaboration among member nations can

be key in sharing knowledge of green technologies and how they can be deployed in the mainstream.

## **Panel V – Needs & Opportunities for Clean Technologies**

Government agencies have established, or are in the process of establishing, mandates and timelines to meet specific goals relating to clean technologies (renewable, alternative, environment-friendly) for their constituencies. Technologies currently exist or are close to commercialisation that can go far in meeting many of these mandates and timelines. This panel will identify some of the specific needs and opportunities that are immediate, and will discuss avenues and methodologies that can be undertaken immediately to accomplish the specific objectives. The panel will further explore how these existing and future technologies can be brought to the marketplace in an expeditious and cost-effective way that will make them affordable and profitable.

### **IMPACT**

The 'Facing our Future' symposium will have a significant impact on not only the participants and guests, but also on the greater water policy community. First, the symposium will provide an invaluable collaborative opportunity for the organising partners, participants, guests and leaders from many different sectors. Government leaders, business professionals, academics and environmentalists will be brought together not only by the breakfast, luncheon and panels, but also by the exhibitor's hall that will be running throughout the day. The panellists' expertise should provide the audience with a better understanding of water and energy and the considerable influence the resource will have on politics, economics and the environment in the 21<sup>st</sup> Century.

Projected outcomes for selected sectors are as follows:

#### **Academic Institutions**

The symposium is anchored by the academic influence and exhibits will highlight their respective leadership in the water policy debate. Their cutting edge research will be displayed to leaders in industry and government, giving them an opportunity to showcase and collaborate with influential industry leaders and policymakers.

#### **Federal, State, & Local Governments**

Research and development in water technologies must go hand in hand with evolving policy. Governments in Australia and the United States are key players in the global sustainability movement, and water conservation and management policies are a critical component. The integral role of Government representatives in the development and execution of the symposium ensures that this progress continues.

#### **Industry Professionals**

The role of responsible corporations is key to this symposium and the greater effort to understand the power of water. Our Australian and United States business partners are leaders in the transition to a sustainable economy; they are creating real change by developing and deploying advanced technologies that reduce society's environmental footprint. Their access to government officials and senior policymakers at the symposium will create partnerships that have the potential to revolutionise the way our two countries utilise water resources.

#### **Environmental Organisations**

Environmental organisations are on the front line of the water conservation movement. Their efforts at spanning the link between technology and policy will be a major feature of the symposium. Environmental experts will have the opportunity to work with government and business leaders to identify key problems with current water policy and suggest improvements and innovations that will encourage a more sustainable future.

As part of Australia Week, the **'Facing our Future'** symposium will enjoy significant media coverage and exposure to a worldwide audience. Australia Week 2008 generated a remarkable 400 million media impressions worldwide and this year's event will continue to build on that success. For more information on Australia Week, please visit [www.australia-week.com](http://www.australia-week.com)