Welcome to the first Australia – United States Climate, Energy and Water (AUSCEW) project newsletter. In this newsletter we outline the intentions of the AUSCEW project, recap the key policy lessons that emerged from the policy forums held in Australia in December 2010, introduce an upcoming speaker tour of Australia by Assistant Professor Michael Webber, and identify several key reports and calendar events in Australia and the United States for the climate-energy-water nexus.

1. What is AUSCEW?

Addressing climate change, conserving freshwater ecosystems and securing adequate energy and water in the face of expanding demand are among the greatest challenges facing modern societies. Yet recognition of the interdependencies between climate, energy and water policy – with resulting synergies and trade-offs – remains limited, leaving societies and governments alike vulnerable to the dangers of confused, conflicted and unintended policy outcomes.

Australia - United States Climate Energy and Water Nexus (AUSCEW) is a three-year collaboration between the United States Studies Centre (USSC) and the Australian National University (ANU) which aims to identify the links between climate, energy and water policy and provide frameworks for robust decision-making. AUSCEW focuses on identifying examples of good practices from industry, government and academia in Australia and the United States,
then sharing and synthesizing this information to facilitate decision-making for a more sustainable society.

During the course of 2011/12, AUSCEW aims to raise the profile of the climate-energy-water nexus in Australia and the United States by engaging in targeted discussions with key stakeholders in both countries, hosting expert speaking tours in Australia, collaborating with like-minded institutions and working towards publishing insightful case studies on the nexus, decision-making guidance and a book by the second half of 2012.

2. Upcoming events: Speaking tour

In May/June 2011, Assistant Prof. Michael Webber (University of Texas at Austin) will be visiting Canberra and Melbourne to discuss mechanisms for integrating energy and water management. Michael leads the Webber Energy Group, which aims to bridge the divide between policymakers and engineers and scientists on issues related to energy and the environment (with a primary focus on the nexus between energy and water; see www.webberenergygroup.com). Michael's work spans science, engineering and policy, integrating policy from the climate change, energy and water spheres to develop mechanisms to deliver multiple benefits for society.

Michael is based at the University of Texas, at Austin, where he is Assistant Professor of Mechanical Engineering at the University of Texas at Austin, Associate Director of the Center for International Energy and Environmental Policy in the Jackson School of Geosciences and Co-Director of the Clean Energy Incubator at the Austin Technology Incubator. Michael also has a background in national security at the RAND Corporation.

A. Prof. Michael Webber’s presentations in Australia will include:

Canberra: Tuesday May 31st, 12:30-1:30pm. USSC-ANU public lecture at the Crawford School of Economics and Government, ANU, Canberra. “Conflicts between climate, energy and water policies – lessons from the United States.”

Canberra: Wednesday June 1st. AUSCEW climate, energy and water nexus workshop with the Australian Public Service, hosted by the Department of Climate Change and Energy Efficiency, Canberra. “Challenges in managing the intersection of climate, energy and water policies – the relevance of US experience.” This afternoon event is for government officials only.

Melbourne: Thursday June 2nd, 5:30-7:30pm. Graduate House, University of Melbourne. Event hosted by the Australian Academy of Technological Sciences and Engineering in Melbourne. Registration via ATSE website closer to the date.

AUSCEW will provide details of further events (and updates on Michael’s visit) online, with links from our homepage.
3. Climate – energy – water nexus policy forums, held 2-8 December 2010

In December 2010, AUSCEW hosted a series of policy forums in Australian capital cities (Canberra, Melbourne and Sydney) to explore the challenges of integrated climate, energy and water policy. Speakers and participants from Australia, the US and Europe discussed case studies, examined policy options and identified potential solutions and decision-making frameworks to address the synergies and tradeoffs across climate, energy and water policy. The two-day Canberra policy forum was also the venue for the official launch of the AUSCEW project by the Hon. Dr Mike Kelly AM, Parliamentary Secretary for Agriculture, Fisheries and Forestry.

The policy forums were a great success in identifying interdependencies and tradeoffs across policies addressing climate, energy and water. Examples can be readily found in the water-intensive nature of many of the energy technologies and practices supported by climate mitigation policies - such as biofuel and solar thermal power production, afforestation, and carbon capture and sequestration. Although not yet widely recognised, water scarcity will be a critically limiting factor for these policies in regions of Australia and the United States where water supplies are already fully or over-exploited. Similarly, technologies for supplementing water supplies in arid and semi-arid regions such as desalination plants can be very energy-intensive.

A continuing theme of the policy forums was the fact that, unless adequately addressed, these tradeoffs create a vicious circle where climate mitigation policies exacerbate existing water scarcity, and where efforts to enhance water supplies require additional energy, in turn increasing emissions of greenhouse gases. Conflicting and confused policy outcomes are the inevitable result of decisions made without sufficient regard for these interactions.

Presentations on emerging technologies and practices, carbon sequestration in the landscape, and energy use in water supply also helped to illuminate many lessons for governance of the nexus. Some of the solutions canvassed included better designed markets, legal mandates, vertical and horizontal integration of decision-making institutions, and improved accountability measures. At a broad scale these solutions are familiar to the sustainable development paradigm, yet at a finer scale tools were identified which relate specifically to the climate-energy-water nexus. Over 2011/12, the AUSCEW project will document case studies and develop policy guidance (both broad and fine scale) for application by industry and governments.

Podcasts and pdfs of the policy forum presentations are available from: http://www.water.anu.edu.au/project/auscew/policyforums/

4. Initial policy brief

AUSCEW has just finalised and released its initial policy brief which describes the climate-energy-water nexus as ‘an attempt to provide a practical and intellectual focus for the decisions which structure the sustainability of our societies’. The brief includes a discussion of the challenges of the nexus, the context of emerging technologies and new policy directions, the new knowledge, tools and frameworks required for policymaking, and integrative governance to underpin nexus solutions.

Five policy recommendations are made within the report for governments, businesses and researchers.
Namely, these recommendations are: “(A) Recognise the compelling need to formulate climate, energy and water policy holistically and in an integrative manner, (B) Provide early and rigorous oversight of the promotion and deployment of new policies, technologies and practices, (C) Develop the most crucial forms of knowledge for next-generation environmental policy, involving cross-sectoral spill-over effects and navigating difficult but necessary tradeoffs, (D) Identify the low-hanging fruit – “no regrets” and win-win policies – and engage with existing regulatory and institutional arrangements.”

The fifth recommendation (E) sets out four categories of solutions to the challenges of the nexus, which are: new technologies and practices, knowledge generation, effective markets and regulatory strategies. Improved governance arrangements are likely to be necessary to underpin solutions in all four of these categories.

The AUSCEW policy brief can be accessed online from: http://www.water.anu.edu.au/project/auscew

5. PMSEIC report

On 1 December 2010, the Prime Minister’s Science, Engineering and Innovation Council (PMSEIC) released a highly significant and pertinent report entitled ‘Challenges at Energy-Water-Carbon Intersections’. The report sets out the nature of the challenge as follows:

“Our energy systems use water; water systems use energy; current energy generation is greenhouse gas-intensive; and land uses for food, fibre and energy production all require water. Solutions in any one area must take into account implications for the others. Ideally solutions, whether on the scale of national governments, cities, or rural areas, would be developed integrally.”

The PMSEIC report goes on to list five recommendations for ‘addressing major components of an overall path to energy-water-carbon resilience for Australia’, namely: “(1) consistent principles for the use of finite resources of water and carbon emissions; (2) improving the distribution and use of energy and water with smart networks; enhancing the energy-water-carbon sustainability of (3) landscapes and (4) the built environments in cities and towns; and (5) enhancing Australia’s knowledge and learning capabilities to meet new demands for integrative knowledge.”

The AUSCEW project is delighted to see this high-profile attention being given to the challenges of the climate-energy-water nexus in Australia. We commend the PMSEIC team on their efforts, and hope to further collaborate with them over the next two years of the AUSCEW project.

6. Lawrence Berkeley National Laboratory workshop

On 29 April 2011, LBL is hosting an energy-water workshop in Berkeley, California. The workshop will “explore the opportunities, needs and barriers to improve management of energy use indirectly affected by water policy and strategy, particularly in the use of water, but also the provision of water and wastewater services. The goal will be to improve understanding of the connections between urban water and energy consumption and move the dialogue towards solutions.”
7. ATSE project

The Australian Academy of Technological Sciences and Engineering is currently looking at the interdependencies of water with energy, population and the changing climate (through its Water forum). ATSE has produced at least two publications which deal with these issues: a report entitled ‘Water and Its Interdependencies in the Australian Economy’, released as part of the ATSE International Workshop Series (June 2010), and an issue of Focus magazine entitled ‘Water and its core role in Australia: Looking at interdependencies’ (Number 163; August 2010).

More information is available from the ATSE website at: http://www.atse.org.au

8. More information and key AUSCEW contacts

For more information about the AUSCEW project, upcoming events and links to relevant climate-energy-water nexus reports and organisations, please visit our project website at:

http://www.water.anu.edu.au/project/auscew/

Key contacts for the AUSCEW project are:

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