Report released – Unconventional gas production and water resources

The AUSCEW report *Unconventional gas production and water resources: Lessons from the United States on better governance* by Adj. Prof. John Williams and Dr Jamie Pittock, from the ANU Crawford School of Public Policy, was released in July 2012.

The report was the outcome of the Canberra unconventional gas production and water resources workshop for Australian government officials in March 2012 which followed meetings in Brisbane and Sydney with state government officials at which three United States participants in the regulation of unconventional gas production shared their expertise.

### Executive Summary precise

1. The knowledge, skills, and experience of American industries, governments, and universities in the field of unconventional gas production and water resource management is valuable and can be used to provide insights for Australian decision makers.
2. Analysis by Geoscience Australia, coupled with recent exploration information, indicates that the Australian continent has large and extensive reserves of both shale gas (SG) and coal seam gas (CSG).
3. Shale gas extraction in the United States has generated a robust debate about the management, regulation, and governance of CSG. The public concern has tended to focus on issues that do not pose the most important environmental threats.
4. US experience is that public and local community concerns should never be dismissed, even if the concerns seem poorly based in terms of factual knowledge and information. Lack of transparency and information can lead to a rapid loss of trust between the community, government regulators, and industry.
5. The history of the debate in the US indicates it is important to obtain and make available at an early stage the baseline data about the natural resources and the environment so that clear insights into the impact of gas production on these natural assets can be obtained.

6. In the first instance, transparent regulations should be developed using a strategic planning and assessment approach and at a scale where cumulative impacts, perhaps from multiple gas extraction projects, on other natural resources can be evaluated.

7. Regulation and evaluation are components to ensure that balanced attention is given to the whole of the gas production system and how it interacts with the landscape and its natural resources. The US speakers indicated that this may be best achieved with a single regulatory agency that integrates across government agencies and interests.

8. The regulatory agency needs to have human resources with the training, skills, and experience to be credible with both the community and industry.

9. Industry’s role should be to improve the quality of transparent communication – of knowledge, information, and monitoring of progress with the community.


**National Water Commission – Water policy and climate change in Australia**

The National Water Commission’s 2011 Biennial Assessment pointed to the interactions between water and associated areas of policy including natural resource management, energy, and climate change.

The assessment suggested that given the recent development and implementation of climate change policy initiatives it would be prudent to analyse the interactions between climate change and water in further detail.

This water policy and climate change report was commissioned in response to that need.

A comprehensive assessment of the interactions between climate change policy and water policy was undertaken across seven key sectors that supply water, use water or otherwise affect water policy. These were urban water, rural water, the environment, agriculture, electricity generation, forestry and mining.

The report sets out five overarching recommendations to address areas where improvement is warranted. They focus on areas assessed to be priorities because of the high materiality of climate change related impacts and because current policy settings may be insufficient to deal with changes brought about by climate change. Each recommendation is supported by a number of more detailed actions.

Recent research from the US

Report Introduction

In a world searching for multifaceted solutions that address concerns over climate change, population and economic growth, resource depletion, and energy security, biofuels emerged as a favourite alternative by policymakers in developed and growing economies alike. Biofuels are seen as a way to mitigate energy related greenhouse gas emissions and increase domestic energy production. However, held under the lens of scientific scrutiny, biofuels, like all other energy supply options, have tradeoffs in terms of life cycle greenhouse gas emissions, energetic and financial costs, land and water use, biodiversity impacts, and food security. In this report the authors discuss two aspects of concern for biofuels: water impacts and the energy return on energy investment.


Rio +20

Coinciding with the Rio +20 United Nations Conference on Sustainable Development, in June this year, we have noticed an upsurge of interest in the Climate, Energy, Water Nexus. Following are links to interviews,

Nexus interviews


Nexus at Rio +20 and nexus messaging


**Nexus reports and papers**


**Recent Nexus Events**


**Other selected Nexus news**


Upcoming study

**Water and carbon mitigation project**

The water and carbon mitigation project is a collaborative effort looking at the water impacts of proposed greenhouse gas mitigation measures in Australia. The project team, led by Dr Philip Wallis of the Monash Sustainability Institute and involving several researchers from around Australia and overseas, are approaching the issue from technical, economic and governance perspectives. The project is funded through AUSCEW, involving Dr Jamie Pittock, and as a case study of an NCCARF project led by Dr Karen Hussey which is assessing Australia’s statutory frameworks with respect to national adaptation planning.

A key finding of the project is that a substantial number of proposed measures in the cleaner power and energy efficiency sectors would decrease demand on water resources by reducing the volume of water needed to cool coal-fired power plants. Mitigation measures proposed in the land sector generally increase water demand, and the project is looking at governance mechanisms to guide these activities in a way that limits impacts on water resources. The project team expects to finalise a journal article shortly, and will present a report on the project to policy-makers in the Federal Government.

We look forward to bringing you an update of this report in AUSCEW’s next newsletter.

**Key contacts**

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**Background information**

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 Dow Sustainability Program of 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.

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