

# **Report of 24 September 2015 Meeting**

## **Royal Society**

### **Southern Highlands Branch**

**Speaker:** Professor Mary O’Kane  
The NSW Chief Scientist & Engineer

**Topic:** Role of the NSW Chief Scientist and Engineer, as exemplified by the review into Coal Seam Gas Activities in NSW to provide advice to Government.

Professor Mary O’Kane was appointed NSW Chief Scientist & Engineer in October 2008. In her role, she consults widely with academia, industry and government to ensure that scientific knowledge and research can be adapted and used to benefit NSW. In 2013 the then Premier commissioned the Review into Coal Seam Gas Activities in NSW and asked the Chief Scientist & Engineer to undertake the review. In this lecture, Professor O’Kane covered the major processes and findings of the review as an example of how the Office operates in providing advice to Government.

The Southern Highlands audience of 45 was somewhat smaller than usual due largely to the school holidays, but those present were privileged to welcome NSW Royal Society President Dr Donald Hector and his wife, and Mr John Hardie, immediate past president.

In providing the context of NSW CSG development, Professor O’Kane pointed out firstly that gas from coal seams had been used during the war, when Balmain Colliery from 1935 to 1946 compressed gas and sold it as motor fuel. Later, climate change concerns drove the desire for lower emissions fuel such as gas. NSW government encouraged prospecting in the 2000s, following the regulating of CSG through the *Petroleum Onshore Act 1991*. Commercial extraction has been conducted at Camden for over 10 years.

The Terms of Reference for the review were far ranging. There had to be a comprehensive industry compliance study involving site visits and well inspections, this work being informed by compliance audits undertaken by regulatory officers, such as the Environment Protection Authority and other government agencies. The review had to also identify and assess any gaps in the identification and management of risk arising from coal seam gas exploration, assessment and production, particularly as they related to human health, the environment and water catchments.

The review also had to identify best practice in relation to the management of CSG or similar unconventional gas projects in close proximity to residential properties and urban areas, and consider appropriate ways to manage the interface between residences and CSG activity. It had to explain too how the characteristics of the NSW coal seam gas industry compared with the industry nationally and internationally. Inspection and

monitoring of current drilling activities including water extraction, hydraulic fracturing and aquifer protection techniques had also to be carried out. Finally, a series of information papers on specific elements of CSG operation and impact had to be produced, to inform policy development and to assist with public understanding.

Regarding the matter of public understanding, Professor O’Kane pointed out very early in her address that a big issue is that nobody trusts CSG companies or government. This was stated along with other conclusions of the report. She said too that although technologies to extract CSG and manage by-products are known, local hydrogeology is not well understood. However the situation should improve as the industry progresses. The distributed nature of the industry raises particular challenges too. She stated her belief that many of the troubling issues could be addressed, but that work was required on many fronts.

**Anne Wood**