

VICTORIA'S ENERGY FUTURE: PROSPECTS AND CHALLENGES

PUBLIC LECTURES AND SYMPOSIUM

23, 25–26 OCTOBER 2013 MELBOURNE, VICTORIA, AUSTRALIA

Abstracts and papers appear in the order they were presented in the Public Lectures and Symposium and are printed after editing only. The Society disclaims any responsibility for errors that may have been made by the authors.

GLOBAL AND NATIONAL ENERGY UPHEAVALS: WHAT'S HAPPENING AND WHAT DOES IT MEAN FOR VICTORIA?

Mr Tony Wood, Grattan Institute, Melbourne

For many decades Australian homes and businesses have been accustomed to reliable, affordable energy. We have many years' supply of coal and gas, substantial uranium resources and the potential to develop large-scale wind and solar energy. But the global and national energy scenes are shifting rapidly and there is great uncertainty about the implications. Gas is challenging the supremacy of coal and nuclear energy is yet to recover from the Fukushima incident, while climate change has added a sustainability dimension to energy concerns.

Globally, governments are struggling to meet the climate change challenge while maintaining energy reliability and affordability. Prices in Australia have been rising at an alarming rate. What are the implications for Victoria, a state blessed with abundant coal, gas, wind and sunshine?

ENERGY DEMAND: LESSONS FROM THE VICTORIAN ELECTRICITY SECTOR

Professor Mike Sandiford, Melbourne Energy Institute

Since 2008, demand for grid-based electrical power services has been declining across the national electricity market and especially in NSW and Victoria.

The reasons behind this are complex and varied, but the impacts are manifest. It is fundamentally changing the way we are using our energy infrastructure and that is challenging traditional models for the business of electricity.

This talk will explore some of the causes and consequences using Victorian electricity as a typical example.

OPPORTUNITIES FOR COMMUNITIES AMIDST THE ENERGY CHALLENGE: HEPBURN WIND

Mr Simon Holmes a Court, Director of Embark Project

Thanks to unimaginably large brown coal deposits, Victoria has enjoyed decades of cheap energy. However, with the growing global understanding of the science of climate change, this dependence is rapidly becoming a liability. We are now faced with the challenge that, in terms of carbon pollution per capita, Victoria is the dirtiest state in the dirtiest major nation.

Thankfully, Victoria is also blessed with world leading renewable energy resources that stand to keep it competitive in a carbon-constrained world. Whereas our fossil fuel deposits are concentrated in the Latrobe Valley, our major source of clean energy, wind, is naturally decentralised.

Taking advantage of this new resource means introducing new infrastructure into many communities with no prior understanding of the technology and, when the community has focused on perceived threats rather than opportunities, proposed projects have been met with great resistance.

The Hepburn community looked to the experience of many European countries and took a different path with the decision to build and operate its own community wind farm. While novel in Australia, the community-owned renewable energy has a long history in Northern Europe and North America and underpins much of the community acceptance wherever it has been established.

The Hepburn Community Wind Farm in the Central Highlands of Victoria is the first community-owned generator in Australia. A modest two-turbine wind farm, scaled to the local community, has almost 2000 members and generates more energy annually than is used by the nearby town of Daylesford and much of the surrounding area. Built by the community to benefit the community, this community enterprise shares the benefits widely between the cooperative members, neighbours to the wind farm and the wider regional community.

As well as delivering local benefits, the project has kickstarted the community energy sector in Australia as other communities have become inspired to build their own projects. These communities are now supported by a not-for-profit called Embark to undertake their own journey, using the Hepburn model.

As more and more communities embrace the opportunities on offer, it will become easier for Victoria to meet its future energy challenges.