



## A CEEM Seminar

### How close is the Hydrogen society?

**Professor Bent Sørensen**

**Head of Energy and Environmental Group, Roskilde University, Denmark**

**Friday 10 September 2004**

**Room G3, Electrical Engineering Building, UNSW**

**3:00 pm to 4:30 pm**

The seminar will provide a technical and economic appraisal of the readiness of hydrogen production, storage, conversion and infrastructure components for use in automotive applications, centralised or decentralised use in the stationary energy sector, and for portable power. It will consider production, storage, distribution and conversion to end-use energy forms. It will consider production from fossil fuels, by electrolysis and direct conversion from renewable energy, and by photosynthesis and fermentation from bio-resources. It will consider storage and distribution of hydrogen - in pressurised containers, liquefied and in metal hydrides and other chemical compounds. Furthermore, the present cost and the cost structure will be discussed in order to evaluate the potentials for cost reduction. A critical review of the assumptions made by national programmes and by industry will be made, and a life-cycle assessment of fuel cell cars in comparison with current vehicles will be given.

The work underlying this presentation is documented in a just completed monograph expected to be published by new year 2005.

*Bent Sørensen received his Ph.D. in physics from the Niels Bohr Institute, Copenhagen University, and the Diploma in Advanced Management from INSEAD, Fontainebleau. He is currently professor at Roskilde University, Institute 2 (head of Energy and Environmental Group), president of NOVATOR Advanced Technology Consulting, and has formerly held academic positions at Berkeley, Yale, Golden, Kyoto, Grenoble and Sydney. He has served as chairman of the Danish Energy Agency Solar Energy Committee and the Hydrogen Energy Committee, as advisor to the OECD, the Japanese and Australian governments, various UN agencies, as technical director and board member of Cowiconsult Inc., and as lead author in the IPCC working group on climate change mitigation. As project manager, he has conducted a large number of Danish and international projects, and he received the Australian-European Award for Eminent Scholars and was knighted by HRH Queen Margrethe of Denmark. He is the author of over 500 scholarly books and journal articles.*

This seminar program is hosted by the Centre for Energy and Environmental Markets at the University of New South Wales. To learn more about CEEM visit [www.ceem.unsw.edu.au](http://www.ceem.unsw.edu.au)

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