

Technology: Servant or Master? The Nuclear Conundrum

Notes from the Fourth BIEE Seminar on The Economics of Technical Change, 15 November

The discussion was opened by Adrian Ham of Nuclear Electric. The main points in his presentation were:

- New technology tended to prosper where there was significant incremental profit or advantage, the industry concerned was viable and the market was growing thereby reducing the impact of the new technology on existing assets.
- In the case of nuclear, much of the stimulus had come from developments external to the UK electricity industry – the Suez crisis, OPEC, and, more recently, global warming. If global warming did prove to be a major issue, then it was difficult to see how solutions could be devised without an expansion of nuclear power.
- The nuclear experience raised three related questions, namely,
 - Is profitability always the most legitimate driver of technical change?
 - Can “sustainability” (in a global environmental sense) be made to drive technical change, and if so how?
 - What kinds of industry structures were most likely to be able to address these issues?

The following points were made in the ensuing discussion:

- It needed to be recognized that the origins of nuclear power lay in military R&D. Even though in some sense, nuclear power was now an “established” technology, further R&D would be required to develop the super systems necessary for greater public acceptability. Such funding would not emerge from normal commercial activities.
- With plentiful supplies of fossil fuels and given the difficulties of nuclear power’s public acceptability, the political weight to put on the other side of the balance needed to be very great if nuclear power was to proceed. This would be unlikely until CO₂ reduction became a political imperative on an international as well as national basis.
- The present direction of policy, with its emphasis on competition and energy as a “commodity” was particularly inimical to nuclear power, which required stable frameworks and assured markets to justify the large capital expenditure involved. Nuclear power had tended to prosper only where there was vertical integration/monopoly and (effectively) government guarantees of last resort.

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**In cooperation with
THE INTERNATIONAL ASSOCIATION FOR
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First Announcement, Call for Papers
for

A Regional European Conference in Celebration of the
10th Anniversary of the Danish Association on:

TRANSPORT, ENERGY AND ENVIRONMENT

The importance of the transport sector in relation to
energy demand and long term environmental goals.

To be held at Marienlyst, Elsinore, Denmark,
3-4 October 1996

The conference will focus on economic and broader
policy issues as well as technological perspectives. Further,
focus will be primarily on medium to long term aspects. The
conference is primarily devoted to European issues, but
papers addressing global aspects are also welcome. General
conference themes:

- Transport sector in relation to energy demand and long term environmental goals
- Recent trends in transport energy demand
- Lifestyle changes and demand for energy and transportation
- Actions and policies to reduce urban air pollution
- Incentives and cost effectiveness of public policies
- Scope for further energy intensity improvements
- The potential for fuel substitution; towards non CO₂ fuels
- Implications for energy industries, the business sector and international trade

The conference is supported by the International Association for Energy Economics (IAEE) and the European Foundation for Cooperation in Energy Economics (EFCEE).

Deadline for submission of abstracts is **15 April 1996**. Abstracts should be between 400 and 600 words giving an overview of the scope of the paper proposed. Authors will be notified whether their paper has been accepted for presentation by 1 June 1996. All abstracts and inquiries should be submitted to the chairman of the program committee as soon as possible and no later than 15 April 1996 at the address below:

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