

IA INTERNATIONAL ASSOCIATION FOR ENERGY ECONOMICS
EE
Newsletter

EDITOR: Nicky France CONTRIBUTING EDITORS: Paul McArdle and Tony Scanlan

A U T U M N 1 9 9 2

Presidents Message

Have you been to this week's IAEE meeting? Yes, there was at least one, statistically, somewhere in the world. Now, I hope to make you aware of how alive the Association really is.

As President it has been my pleasure to attend a number of IAEE events this year. I have been impressed by the number of meetings and the plurality of subjects. There have been the large conferences and the small, more intimate chapter luncheons and affiliate workshops. Many of the smaller meetings with some 20 people have been just as intellectually stimulating as the larger occasions.

The mosaic of IAEE activities forms a picture reflecting a wide spread of topics and interests. The surprising fact of this activity is that it is not run by the Council or the Head Office - who may play just a catalytic role - but by the sheer enthusiasm of the local members. We do not have a 'command economy' but a very democratic system of individual chapters and affiliates developing their own initiatives. They organize the speakers, sometimes their own funding, run their own announcement campaigns and conduct the meetings successfully. As President at the hub of the Association I am most grateful for all the voluntary work expended at the rim. This is what makes the wheel go round! By laws of physics infinite forces acting at the centre would not have produced the same effect. And the results are remarkable. With 35 affiliates and 17 chapters each holding, say, one meeting per year we statistically have one IAEE event every week. I can foresee that soon there will be one meeting every day - excepting public holidays. With such a spread of activities the question arises, 'do we really need it?' Yes, for at least two reasons. It heightens the visibility of the Association, gives members a feeling of belonging to an active body and attracts new potential members. The decentralized grassroots activity is a necessary element in keeping the IAEE alive. But there are differences, the chapters and affiliates in North America and Europe have a well established tradition. Some of the new affiliates have not yet reached the critical mass to have a multiplying effect of their own. Council has decided to implement a 'godmother' concept where an established affiliate in the region

takes the responsibility to guide their younger colleagues. I am looking forward to cooperation from the affiliates.

The personal contact in meetings is also an essential part of the communication process among professionals and contributes to the understanding and advancement of energy economics. This leads

me to ponder how this wealth of knowledge and ideas can best be utilized. The unique IAEE network exists but is hardly tapped. I know, the same observation has been made by all presidents before me, and even a calculation of an accumulated experience of 100,000 professional years was put forward. To bring this experience to good use must be a high objective. Especially the new affiliates in eastern Europe and the developing world confronted with the problems of

applying market economic principles in energy economics would greatly profit from learning of other countries success and failures. The Council will again deliberate how the collective knowledge may be efficiently exploited and for this your experience and ideas would be most helpful.

Publishing is one way of making knowledge available. The *Energy Journal* has won a fine reputation as a learned journal. Clearly, the more fundamental articles have their place there. But shorter communications, be they reports, news or ideas, could be shared with other members through the *Newsletter*. We hope to increase the number of issues to five next year and maybe six the following. With this expansion the forum more material is needed. The Editor has many exciting ideas but cannot go it alone. The worldwide spread of members is a worldwide spread of interesting news items. So please write. In the end it is up to you to make the *Newsletter* the reading you have always wanted.

Coming to the end of my last President's Message, I would like to impress on you how important I regard the role of the members and the affiliates. The participation of the individual member is what makes the IAEE such an exciting and active body. Another personal experience has been the friendliness I have met in all quarters for which I most warmly thank you.

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IEA reports on Hungary's energy policies

Change is sweeping the energy sector in Hungary as the country strives to complete its transition to a market economy. On 1 January 1992 the national electricity board was transformed into a two-tier holding company. November 1991 saw the start of the first coal mine privatization in eastern Europe. The Hungarian Oil and Gas Trust, one of the region's biggest industrial groups, has been reorganized. The IEA report examines these and other developments in detail and evaluates the country's evolving policies on energy and related issues such as the environment, outlines the changes in Hungary's energy supply industries, looks at end-use and efficiency and discusses forecasts of energy balances and indicators through 2010.

Thanks to experiments with liberalization dating back almost 25 years, Hungary is leading eastern Europe as the region goes through the often difficult process of economic reform. After the country's first free multi-party elections in April 1990, the non-communist coalition government accelerated the pace of reform, including restructuring of the energy sector. At the time of the IEA's review, its energy policy objectives included diversifying energy import sources, improving energy efficiency, establishing market conditions in energy supply, allowing prices to reach international market levels, devoting attention to environmental concerns, involving the public in decision-making, curtailing monopoly powers and limiting state intervention.

Hungary has depended on the former USSR for imports of oil, gas and electricity. Its major sea link for imports has been a pipeline through Yugoslavia that was closed last autumn by that country's civil war. Given the uncertain conditions in the former USSR and Yugoslavia, Hungary is putting high priority on developing infrastructural links with or through OECD member countries. Hungary's natural gas production peaked in 1985. Coal production has been declining for years and a substantial contraction of the industry appears inevitable. Even though the high-sulphur, low-calorie indigenous coal presents environmental problems, it remains of strategic value, especially until outside supply links can be built. Oil production has been small but stable. The new Hungarian Oil and Gas Company operates one of the most sophisticated refineries in the region, and foreign oil companies are active, especially in distribution. However, legislation is needed to ensure access for new participants in refining, transportation, storage and marketing.

Nuclear power production, which began in 1983 at the Paks power station, provides a significant share of Hungary's electricity. Paks' safety characteristics are highly regarded and its performance is as good as at the best stations in western Europe. Hungary's newly reconstituted electricity trust is considering plans to enhance the country's generating capacity, over the short term, with gas turbines in combined heat and power plants at district heating stations. Long-term decisions on investment in new baseload plant capacity will be based on examination of the development of electricity demand as the economy is restructured.

The government is expected to retain a role in ownership in the energy sector, at least in the short term. However, to avoid potential conflicts of interest and facilitate efficient and effective operation of energy industries, the report stresses the need for separation of ownership, management and regulatory functions.

Innovations in forecasting 10th GEE workshop on forecasting Schloß Haigerloch, 3-4 September 1992

The tenth meeting of the annual GEE Forecasting Workshop took place again at the historic 12th century castle of the Stauffer. Thirty-five forecasting experts from the whole German-speaking area, including IAEE President, Ulf Hansen, discussed 6 lectures concentrating on 'Innovations in Forecasting'. Professor Eberhard Schöneburg from Expert Informatik, discussed the first commercial (artificial) neural net in Europe for energy demand forecasting, developed on behalf of the Energie-versorgung Leverkusen. The neural net is the first step to an energy management concept aimed at the economic optimization of daily gas consumption and Schöneburg demonstrated how to optimize the parameters of conventional statistical forecasting techniques like exponential smoothing by using so-called 'genetic algorithms'.

Dr. Hans-Georg Zimmermann from the Siemens Research Laboratory in Munich presented the 'state-of-the-art' in using neural nets for better forecasting rates of interest and further important economic indicators. The actual results of the large-scale project carried out under his leadership for all leading German banks underlined the aspiration 'to put the whole business of economic forecasting on a new basis'; to do so, the fastest parallel computing systems are necessary for evaluating a new neural net, even then they will need the whole night as running time.

No transputer is needed for the software from Volker Oertel (Fachhochschule Albstadt) which allows even laymen to use the elementary statistical techniques by simply depressing the function key, and, for short time series the system will determine the best technique with respect to the immediate past within seconds. The software, 'Prom(P)t', may therefore be especially useful as an educational tool for beginners.

The economist Dr. Georg Erdmann (ETH Zürich) and his colleagues from Stuttgart University, Professor Dr. Herman Schnabl and Dr. Matthias Ginter, described the results of their research on forecasting crude oil prices. Georg Erdmann presented a new concept for long-term forecasting of oil prices, which allows 'better forecasts than all conventional models'. At the core of the model was the observation that the oil price during the last decade was following one 'spiral attractor'. In a way, Georg Erdmann was confirmed by his colleagues from Stuttgart who stated that the spot market prices of the last years showed no significantly chaotic structures.

Two experts from the Research Centre in Jülich, Dr. Friedhelm Drepper and Dr. Karl-Friedrich Albrecht, reported on different experiences in the field of non-linearities. Friedhelm Drepper talked about 'non-linear time series analysis of speculative prices' and referred to studies on epidemic diseases. Karl-Friedrich Albrecht, who previously worked in the GDR and, for some time, in Moscow, presented the Evolon Model. As early as 1985 it was able to forecast the breakdown of the Soviet Union by means of analogy to growth in nature and saturating systems. The simple model using only one equation is universally applicable for all areas or products which are not easily substitutable. This is especially true for electric energy as well as for total energy consumption.

Manfred Härter, (GEE)

**First Annual Middle East Petroleum and Gas Conference
(MPGC '93)**

11-13 January 1993

Dubai International Hotel

Dubai chosen as venue for strategic international conference on Middle East oil and gas

More than 200 delegates from the Middle East, USA, Europe and the Far East are expected to attend the First Middle East Petroleum and Gas Conference (MPGC '93) to be held in Dubai next January. IAEE members can attend with a 10% reduction on the fee.

Focusing on 'The New World Oil Order' and the expected rise in the importance of the region post Gulf, this annual

gathering of top government and leading oil industry players is aimed at improving linkages and encouraging dialogue and investment between the Middle East and the international petroleum industry.

Gulf oil ministers, international energy experts and senior industry officials will address crucial strategic and policy issues, with emphasis on the role of the Middle East in the global supply/demand situation, crude and product trading, evolution of national oil companies and the prospects for exploration, LNG, petrochemicals and refining.

'The Post Gulf Era has opened vast new opportunities for the global oil industry and the nations of the Middle East. This new era will witness internationalisation of oil investments and a new sense of excitement in the critical part of the world', said Dr. Fesharaki.

To be officiated by H.H. Shaikh Mohamed Bin Rashid Al-Maktoum, this conference is organised by IBC (Asia-Pacific)

Conferences, a member of International Business Communications (Holdings) plc, London, with the endorsement of the IAEE and M/s Rais, Hassan, Saadi and Co as prime local sponsors.

Conference attendance is £625 sterling to IAEE members, which reflects a 10% discount off the

A prominent international panel of Advisors to be chaired by Dr. Fereidun Fesharaki, Director of Resources, East-West Center, Hawaii and President Elect of the IAEE will lead discussion on key issues:

- Middle East economic outlook and national policy questions
- Re-structuring of the new world oil industry - new directions
 - Emergence of Middle East private oil companies
 - Pricing of Middle East crude oil in the 1990s
- Downstream integration abroad ■ Financing energy projects
- Foreign equity prospects ■ Environmental issues

standard registration fee.

Enquiries: Vimla Mulchand, IBC (Asia-Pacific) Conferences, 545 Orchard Road, #12-01, Singapore 0923. Tel: 65 +732-1970; Fax: 65 +733-5086, and Smita Prabhakar, AMS International, Dubai. Tel: 971-4 531-400.

**Conference Proceedings
Tours, France
18-20 May 1992**

The Proceedings from the 15th International Conference of the IAEE at Tours, France, 18-20 May 1992 are now available for purchase from IAEE Headquarters in Cleveland. This TWO volume set is available to members for \$99.95 and to non-members for \$139.95 which includes 4th class surface mail in both cases. Payment must be made in US dollars with checks drawn on US banks. Please note that the IAEE does NOT accept credit card orders.

To order your copies, please complete the form below and mail a copy of the form, together with the appropriate payment to: David Williams, IAEE Headquarters, 28790 Chagrin Blvd, Suite 300, Cleveland, OH 44122, USA

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The Energy Journal: Forthcoming papers

The Winter (December) issue of The Energy Journal will contain the following:

What does a negawatt really cost?: Evidence from utility conservation programs

Price and cost impacts of utility DSM programs

Fiscalite petroliere et risque (in French)

Multiple energy supply risks, optimal reserves and optimal domestic production capacities

Energy demand with the flexible double-logarithmic functional form

Estimating disaggregated price elasticities in industrial energy demand

Cuba's transition to market-based energy prices

Khazoom-Brookes postulate and neoclassical growth

Energy intervention after Desert Storm: some unfinished tasks

The application of Divisia Index to the decomposition of changes in industrial energy consumption

Imperfect price-reversibility of US gasoline demand: asymmetric responses to price increases and declines

Paul Joskow, MIT

Eric Hurst, Oak Ridge, Tennessee

Victor Padilla, INRS, Quebec

Peter Zweifel, University of Zurich

David Nan, University of Oklahoma

Mahmoud Elkhafif, Ontario Ministry of Energy

Jorge Perez-Lopez, Association for the Study of Cuba

Harry Saunders, Decision/Risk Analysis, Danville, California

Richard Gordon, Penn State University

K.Q. Lui and Ong Ang, National University of Singapore

Dermot Gately, New York University

New book from IAEE members Energy Efficiency and Human Activity: Past Trends, Future Prospects Lee Schipper and Stephen Meyers

Lee Schipper led a roundtable discussion at the Royal Institute of International Affairs, London, UK on 30 September, 1992. Schipper presented the main findings from his new book¹ which presents an analysis of historic trends in global energy use, describes future prospects, and discusses policies for restraining growth in energy use. The book draws on analyses of energy use conducted by the International Energy Studies Group at Lawrence Berkeley Laboratory over the past decade and gives an analytical framework that considers three basic factors that drive energy use in each sector: activity, structure, and energy intensities; separate coverage is given to the industrial countries, the developing countries, and the former Eastern Bloc.

The major part of the book describes how and why energy use has changed in the world since 1973. Energy intensities in manufacturing have declined continuously in OECD countries, contributing to a fall in energy use despite considerable growth in activity. In passenger travel and freight transport, shifts toward more energy-intensive modes such as automobiles, air travel and trucks have pushed energy use upward. In the residential sector, structural change, especially increase in appliance ownership, has caused energy use to grow in much of the world. In the service sector, fuel intensity for heating has declined greatly in the OECD countries, but electricity intensity has risen. In summarizing the past experience, several issues are discussed: What was the role of higher energy prices? Of energy-efficiency policies? Did energy savings represent breaks in long-term trends?

In considering the future, historical analysis was used as a guide, supplementing it with judgement about the possible evolution of key trends. Growth in activity will be especially strong in the developing countries, and structural change is

likely to increase energy use considerably as well. The greatest potential for structural change is the former Eastern Bloc, but the pace of change is very uncertain. Structural change is occurring much more slowly in the OECD countries. In considering future energy intensities in each sector, the direction in which trends seem to be pointing and the potential for reducing energy intensities are discussed. There is considerable potential for lowering intensities in all sectors and country groups, but the direction of current trends makes it unlikely that most of the potential will be realized without great action than is now occurring. To illustrate the extent to which energy intensities might be reduced the authors present three scenarios for the OECD countries and the CIS. With higher energy prices (resulting in part from internalization of environmental externalities) and strong energy efficiency policies, intensities in the OECD countries in the year 2010 could be nearly 50% less on average than the level to which trends seem to be pointing. The Soviet scenarios suggest that intensities could decline by almost that much if economic reform is successful and technology levels are upgraded to Western standards. In both cases, however, achieving reductions of this magnitude will take considerable policy effort.

In conclusion, the book summarizes the reasons why restraint in energy use is an important strategy for reducing environmental problems and supporting sustainable development worldwide and outlines key steps for achieving such restraint. Strong action is called for by governments at all levels, but stress is placed on the importance of considering the full range of factors that will shape realization of the energy efficiency potential around the world and the need to look beyond energy policy for solutions. Schipper and Meyers suggest how the emergence of a global market economy with relatively open borders could enhance efforts to improve energy efficiency and contend that strong policies in the OECD countries to encourage greater energy efficiency would have profound effects worldwide.

¹*Energy Efficiency and Human Activity: Past Trends, Future Prospects*, Cambridge University Press, The Edinburgh Building, Cambridge, CB2 2RU, UK, £29.95.

The cost of capital: is energy different?

3rd BIEE seminar on energy investment
Chatham House, 10 June 1992

The discussion was opened by Eric Price (until recently the Chief Economist at the UK Department of Energy). The main points of his presentation were:

1. It was self-evident that the cost of capital to energy industries must be different from the cost of capital for the economy as a whole, if only because the risks will be different; and different energy sectors will have different costs of capital.
2. The 'cost of capital' is the opportunity cost, represented by the return that could be earned from another investment of comparable risk and return. As with investment generally, the normally accepted way of determining the cost of capital was the Capital Asset Pricing Model, consisting of two elements:
 - a) The 'risk-free' rate (in the UK, the Treasury Bond rate would indicate a figure of around 4% in real terms);
 - b) The 'equity-risk' premium. (Long-term studies in the UK indicate some 9% 'real' after tax.) This reflects a general market risk that cannot be avoided no matter how much diversification takes place (but with a standard error of +/- 2%). However, individual firms/sectors were more or less risky than the market as a whole, so that the general 'equity-risk' premium needed to be multiplied by a factor (the 'Beta factor') reflecting both relative risk and 'gearing'. But Beta factors are not always easily determined, and may vary considerably within a sector. (For example, a study of US electric utilities showed a range from 0.42 to 1.06).
3. Because individual projects may vary in risk, each project has its own Beta: and should be evaluated according to its own marginal cost of capital. The logic of this was that companies ought to assess speculative/new ventures at a higher cost of capital than the expansion of existing business, which in turn could be at higher rates than projects of cost improvement using proven technology; although in practice company behaviour was often quite different from this (eg, the lower priority given to energy saving schemes).
4. There was a particular problem in determining the cost of capital in price-regulated energy industries, since regulation itself may be aimed at a desired rate of return, so that the argument becomes circular; and regulatory uncertainty can increase the cost of capital.
5. Looked at nationally, the optimum allocation of resources occurs when the marginal return to marginal cost of each type of factor production equates: but this assumes that inputs and outputs are properly costed and priced. In the energy sector this is often not the case, in view of:
 - a) resource depletion questions;
 - b) market imperfections (eg, lack of information on energy conservation);
 - c) environmental impacts not reflected in costs/prices.
6. There were several issues that were worth discussion:
 - a) Whether the state should intervene in underwriting risky activities to take account of all the points at 5 above;
 - b) The need to cross-check *RPI-X* price regulations against the rates of return and the need for new investment;
 - c) If the cost of capital is project specific, how are judgements to be made on the cost of capital for companies?;
 - d) Should Government Departments judge individual North Sea projects against a common test discount rate.

In the ensuing discussion, the points covered included the

following:

- i) There was considerable discussion as to whether individual projects should be assessed on the basis of their own 'cost of capital', in other words whether the discount rate applied should include project specific risk. An alternative was to add to the 'risk-free' rate an allowance for unavoidable 'sector' or 'category' risk to arrive at the test discount rate, but that project specific risks should be addressed directly in the appraisal.
- ii) Determining the general risk in a particular sector, or for a particular company, contained considerable subjective judgement.
- iii) Regulatory risk was likely to be a major factor for utilities. Political factors would influence the cost of capital to a significant extent.
- iv) In the public sector, the approach had been to use standard tests designed to ensure that the public sector did not 'crowd-out' the private sector, but judged against *ex-post* private sector returns. In practice these tests had often been overridden by public expenditure constraints.
- v) Capital rationing, both in the public and private sector, was in practice often a crucial determinant of the appraisal rates used by companies or individuals. This was an important part of the explanation for the lack of up-take on energy conservation projects with rapid pay-back.
- vi) The environment raised a particular problem for the DCF approach. To use low DCF rates for environmental abatement projects, renewable energy, or long-term R & D was a form of subsidy, which depended on political value judgements rather than economic analysis.

M.J. Parker, BIEE

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NEWS IN BRIEF

From Australia

At the conference 'Energy and the Environment: The Road from Rio', organized by the Centre for Applied Economic Research and held in Melbourne on 24 July and Sydney on 25 July Lee Schipper presented two papers entitled, 'The automobile in an environmentally constrained world' and 'Energy efficiency and human activity'. Other IAEE members who contributed to the meetings were Richard Clarke, John Daley, Barry Jones, Greg McColl and Tony Owen.

Fereidun Fesharaki, President-Elect of the IAEE, gave a presentation entitled 'Middle East and the Pacific Rim petroleum outlook for the 1990s' to members of the Australian affiliate in Sydney on 4 August. The meeting was well attended, and the large numbers of questions from the audience reflected the high degree of interest in the topic.

The Australian affiliate looks forward to hosting more visits by IAEE members in the future.

A.D. Owen
Australian Affiliate

Studies on environmental and policy issues

The Policy Analysis Department of the American Petroleum Institute produces studies on the economics of energy and environmental policy issues. If you would like to be added to the mailing list to receive these studies free of charge as they are published, please call Sally Pleasure at (202) 682-8549.

Not lost but gone before!

In the 1992-1993 Membership Directory's listing of International Conferences the 12th was lost. It was one of the IAEE's most successful conferences and was held in New Delhi 4-6 January 1990. The proceeding with the plenary discussions have recently been published as books¹. My apologies to the Indian affiliate who worked so hard to make it such a memorable occasion - lost but not forgotten.

Ulf Hansen
President, IAEE

¹Vedam Books International, New Delhi, India.

Swiss distinction

Lucio D'Andrea, Deputy Director of the Energy Division of the United Nations Economic Commission for Europe has been elected a Distinguished Member of the Society of Petroleum Engineers and will be presented with his SPE Distinguished Member Certificate at the President's Luncheon during the SPE Annual Technical Conference and Exhibition in Washington, D.C. on Wednesday, 7 October 1992. The Certificate honours those members of the Society of Petroleum Engineers who have achieved distinction deemed worthy of special recognition by the Society, it acknowledges those members who have attained eminence in the petroleum industry or in the academic world, or those who have made unusually significant contributions to the Society. Congratulations!

Correction

The author of a paper presented at the 1991 North American Conference, entitled "The Inability to Forecast Oil Prices", was incorrectly referred to as James Tobin in the Spring 1992 Newsletter. The correct author is John C. Tobin of Applied Planning Associates in Evergreen, Colorado, USA.

Paul McArdle
North American Editor

From the USA

Dennis O'Brien, Chief Economist of Caltex, has been elected President of the US Chapter of the IAEE (USIEE) for a two-year term (1993-94) to succeed Anthony J. Finizza, Chief Economist at ARCO Corporate Planning.

Abstract deadline for North American Conference

The deadline for abstract submissions to the 15th Annual North American Conference of the IAEE is 21 May 1993.

For contact information see Calendar Section (10-13 October, 1993).

Publications

Are Price and Income Elasticities of Demand Constant? The UK Experience by Joyce Dargay, Oxford Institute for Energy Studies (OIES), 57 Woodstock Road, Oxford OX2 6FA, UK, 1992, pp36, UK £14, Overseas £16.

Electricity Pricing: Current Practice and Future Developments by D. Hawdon, E. Marshall and R. Orson, Surrey Energy Economics Centre, Department of Economics, University of Guildford, Guildford, Surrey GU2 5XH, UK, 1992, 24pp, UK £18, Overseas (Air) £20.

Energy Efficiency and the Environment, IEA, OECD Publication Sales Office, Paris, France, 238 pp., \$48.00 (US), ISBN 92-64-13561-8.

Engineering Reference Book on Energy and Heat, VDI - Gesellschaft Energietechnik, P.O. Box 10 11 39, W-4000, Dusseldorf 1, Germany, 1992, 213 diagrams, 52 tables, DM 380.

Financial Oil Derivatives: from option to oil warrants and synthetic oilfields by Xavier Trabia, Oxford Institute for Energy Studies (OIES), 57 Woodstock Road, Oxford OX2 6FA, UK, 1992, pp170, £35.

Global Energy: The Changing Outlook, IEA, OECD Publication Sales Office, Paris, France (1992), 204 pp., \$40.00 (US), ISBN 92-64-13618-5.

Global Warming: The Benefits of Emission Abatement, William R. Kline (Institute for International Economics) IEA, OECD Publication Sales Office, Paris, France (1992), 70 pp., \$15.00, ISBN 92-64-13639-8.

International Energy Conference on Demand Side Management: A Current and Future Resource, IEA, OECD Publication Sales Office, Paris, France (1992), 331 pp., \$34.00, ISBN 92-64-13649-5.

International Issues in Energy Policy, Development and Economics ed by James P. Dorian and Fereidun Fesharaki, Westview Press, 5500 Central Avenue, Boulder, Colorado 80301, USA, 1992, 350pp, US\$45.

Non-renewable Resources Extraction Programs and Markets, John M. Hartwick, Harwood Academic Publishers, c/o STSB, Order Department, P.O. Box 786 Cooper Station, New York, NY, USA 10276 (212) 645-2459. 161 pp., \$48.00 (US).

Photovoltaic Systems for Electric Utility Applications Opportunities, Critical Issues and Development Perspectives, IEA, OECD Publication Sales Office, Paris, France (1992), 212 pp., \$34.00, ISBN 92-64-13645-2.

Prospects for Oil Prices in 1992 and Beyond by P. Caddy, D. Hawdon, R. Jordan, P. Stevens and J. Toalster, Surrey Energy Economics Centre, Department of Economics, University of Guildford, Guildford, Surrey GU2 5XH, UK, 1992, 32pp, UK £18, Overseas (Air) £20.

Seminar on East-West Energy Trade, IEA, OECD Publication Sales Office, Paris, France (1992), 312 pp., \$50.00 (US), ISBN 92-64-13621-5.

Speed of Adjustment and Market Structure: A Study of the Gasoline Market in Germany by Allesandro Lanza, Oxford Institute for Energy Studies (OIES), 57 Woodstock Road, Oxford OX2 6FA, UK, 1991, pp26, UK £14, Overseas £16.

Tanker Spills: Prevention by Design, National Academy Press for the Committee on Tank (continued on page 8....)

A MAJOR INTERNATIONAL DISCUSSION FORUM

The **ENERGY POLICY** Forum

Nuclear Power - Legacy and Lessons

3-4 December 1992

Council Chamber, Kensington Town Hall, London, UK

Organized and Sponsored by the journal

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| <ul style="list-style-type: none"> ■ John Surrey
(SPRU, University of Sussex, UK)
The ethics of nuclear decommissioning ■ Gordon Mackerron
(SPRU, University of Sussex, UK)
Nuclear costs: why do they keep rising? ■ James M. Jasper
(New York University, USA)
Patterns of state involvement in nuclear development ■ John Chesshire
(SPRU, University of Sussex, UK)
Why nuclear power failed the market test in the UK ■ Clark W. Bullard
(University of Illinois, USA)
Low-level radioactive waste: regaining public confidence | <ul style="list-style-type: none"> ■ James Hewlett
(Washington DC, USA)
The operating costs and longevity of nuclear power plants ■ Victor Gilinsky
(Washington DC, USA)
Nuclear safety regulation - lessons from US experience ■ Anders Martensson
(Lund University, Sweden)
Inherently safe nuclear reactors ■ Stefan Lindstrom
(Statskontoret, Stockholm, Sweden)
Sweden's nuclear phaseout ■ Michael Damian
(IEPE, Grenoble, France)
Nuclear power: the ambiguous lessons of history |
|--|--|

The **ENERGY POLICY** Forum will offer a unique opportunity for delegates to contribute to an open discussion on all of the above and any related topics concerned with nuclear issues. The forum will comprise four sessions over two days with expert session chairmen leading discussions after overview presentations by speakers from the United States, UK, France and Sweden. The **ENERGY POLICY** Forum follows the publication of two special issues of the Butterworth-Heinemann journal **ENERGY POLICY**: (July and August 1992).

FORUM COMMITTEE

Steve Thomas (SPRU, University of Sussex, UK); Frans Berkhout (Princeton University, USA);

Nicky France (Editor, **ENERGY POLICY**, Horsham, UK)

For full details of the final Forum programme and registration information please complete and return the Provisional Registration form.

PROVISIONAL REGISTRATION FORMI am interested in attending **THE ENERGY POLICY FORUM**:

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Please return this form to: **John Herriot**, The Energy Policy Forum, Meetings Management, Straight Mile House, Tilford Road, Rushmoor, Farnham, Surrey, GU10 2EP, UK. Tel: +44 (0)25125 5414; Fax: +44 (0)25125 2101

The ENERGY POLICY Forum is a Butterworth-Heinemann Conference

Publications

(continued from page 6...)
 Vessel Design, National Research Council, 2101 Constitution Avenue, NW, Washington, DC, USA, 20418. 350pp., \$34.95 (US).

The Effects of Utility Demand Side Management on Electricity Costs and Prices, Oak Ridge National Laboratory, ORNL Public Affairs, PO Box 2008, Oak Ridge, Tennessee, USA 37831-6266, (615) 576-0226.

The Golden Century of Oil, 1950-2050, C.J. Campbell, Kluwer Academic Publishers Group, P.O. Box 989, 3000 AZ Dordrecht, The Netherlands. 345 pp., \$99.00 (US).

The Results of UK Electricity Privatisation by Colin Robinson, Surrey Energy Economics Centre, Department of Economics, University of Guildford, Guildford, Surrey GU2 5XH, UK, 1992, 16pp, UK £18, Overseas £20.

The Term Structure of Oil Futures Prices by Jacques Gabillon, Oxford Institute for Energy Studies (OIES), 57 Woodstock Road, Oxford OX2 6FA, UK, 1991, pp44, UK £14, Overseas £16.

US Environmental Imperatives

and the Accelerated Export of Refining Capacity by Peter C. Fusaro, International Research Center for Energy and Economic Development (ICEED), Box 263, University of Colorado, Boulder, Colorado 80309-0263, USA, 1992, 16pp, US\$10.

Calendar

26-27 October 1992, Brussels, Belgium: 2nd European Forecasting Seminar. Contact: Benelux AEE, Peter Van Der Meiren, Managing Director, Rue de la Regence, B-1000 Brussels, Belgium. *Tel:* 32 2 519 3918. *Fax:* 32 2 513 4206.

26-28 October 1992, New Orleans: 14th Annual IAEE North American Conference. Contact: Joan Walsh Cassidy. *Tel:* (202) 371 1191. *Fax:* (202) 371 1090.

9-11 November 1992, Bangkok, Thailand: Conference on Environmentally Sound U.S. Technologies for Oil and Gas Exploration. K. Thompson, U.S. Department of Energy. *Tel:* (202) 586-7997.

11 November 1992, London, UK: Last in Series on Energy and Investment, further details from Mary Scanlan, see 23 September.

16-19 November 1992, Orlando, Florida, USA: 1992 International Gas Research Conference. Gas Research Institute. *Tel:* (312) 399-8300.

25-26 November 1992, Dusseldorf, Germany: Human Influence on the Climate III: The current situation: concepts of energy technology: realization. Contact: VDI-GET, Postfach 10 11 39, D-4000, Dusseldorf 1, Germany. *Tel:* +49 211 6214-414.

1-2 December 1992, Frankfurt, Main, Germany: Perspective for Energy Engineers: Students and practising engineers in dialogue in Europe '93. Contact: VDI-GET, Postfach 10 11 39, D-4000, Dusseldorf 1, Germany. *Tel:* +49 211 6214-414.

7-9 December 1992, London, UK: 7th RIIA/BIEE/IAEE International Conference. New frameworks for energy demand. Contact: The Conference Department, Chatham House, 10 St James's Square, London, SW1Y 4LE, UK. *Tel:* (071) 957 5700. *Fax:* (071) 957 5710.

11-13 January 1993, Dubai, UAE: 1st Annual Middle East Petroleum and Gas Conference. Contact: Vimla Mulchard, IBC (Asia Pacific) Conferences, 545 Orchard Road #12-01, Far East Shopping Centre, Singapore 0923. *Tel:* (65) 732-1970. *Fax:* (65) 733-5087.

28-29 January 1993, Oslo, Norway: Towards limitations on energy consumption? Contact: Bjorn Brochman. *Tel:* (+47)-2-738853; *Fax:* (+47)-2-738831.

27-29 July 1993, Bali, Indonesia: 16th IAEE International Conference. Contact: Conference Secretariat, c/o REDECON, Gedung Patra Lt. 1, Jl. Gatot Subroto 32-34, Jakarta 12950, Indonesia. *Tel:* (62 21) 511 821, 511 824. *Fax:* (62 21) 515 133.

10-13 October 1993, Seattle, Washington, USA: 15th Annual North American Conference of the IAEE. Contact: Joan Walsh Cassidy, 1101 14th St., NW, Suite 1100, Washington DC, USA. *Tel:* (202) 371 1191. *Fax:* (202) 371 1090.

7-10 November 1993, Colorado, USA: Tenth Annual International Symposium on Alcohol Fuels at Colorado Springs.

25-27 May 1994, Stavanger, Norway: 17th IAEE International Conference. Contact: Odd Anker Hassel. *Tel:* 47 2 531034. *Fax:* 47 2 534308.

15-17 August 1994, Espoo, Finland: Sixth International Conference on Thermal Energy Storage. Contact: Helsinki University of Technology. *Tel:* (358-0) 451 3193.

IAEE Newsletter

Volume 1 Autumn 1992

The IAEE Newsletter is published quarterly in January, April, July and October, for and on behalf of the IAEE for distribution to its members by In Context, 101 Trafalgar Road, Horsham, West Sussex, RH12 2QL, UK. *Tel:* 0403 211160; *Fax:* 0403 66738. Items for publication and editorial inquiries should be addressed to the Editor, Nicky France, at In Context, address above.

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Membership, subscriptions and claims: Inquires should be made to David Williams, IAEE Executive Director, Administrative Management Services, 28790 Chagrin Blvd, Suite 300, Cleveland, OH 44122, USA; *Tel:* and *Fax:* 216 464 5365.

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IAEE Newsletter
 International Association for Energy Economics
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