

Energy Library Update

May 2007

May has been a very busy month for the Energy Library team. We have been re-organising our substantial physical collection of books, standards and journals. So this month's Update has fewer sections than usual - next month it will be back to normal.

We welcome our new members from Kordia, whose collection of broadcasting and telecommunications we now hold in the library.

The photo at the right is of some of the library team during our April visit to Te Apiti wind farm.



If you would like any of the resources listed below just email library@energylibrary.org.nz quoting the title of the item or its reference code. Charging depends on the agreement your organisation has with us. Note that most Update items are issued for 2 weeks.

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New Books, Standards and DVDs

OECD Environmental Performance Reviews: New Zealand. (2007) Organisation for Economic Community and Development (OECD). Paris: OECD

Covers: Water and Waste Management; Nature and Biodiversity Conservation; Economy and Environment; Agriculture, Forestry and the Environment; Environmental-Social Interface; International Co-operation.

(To borrow this book email library@energylibrary.org.nz Ref: **05OECD**)

Power & opportunity: A directory of wave and tidal energy devices & UK support

(2006) London: British Wind Energy Association (BWEA)

A 64 page directory.

(To borrow this directory email library@energylibrary.org.nz Ref: **05BWEA**)

AS HB 167: 2006. Security risk management.

(To borrow this standard email library@energylibrary.org.nz Ref: **05Security**)

AS 2187.1: 1998. Explosives: Storage, transport & use. Part 1: Storage
(To borrow this standard email library@energylibrary.org.nz Ref: **05Explosives**)

The following new standards adopted by Australia provide organizations with a common, internationally agreed approach to measuring and reporting greenhouse gas emissions and removals. Note that they are not held in the Energy Library collection at this stage but if they are of interest to sufficient numbers of members we will purchase them and make them available for loan.

AS ISO 14064.1-2006: Greenhouse gases - Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.
(To register your interest email library@energylibrary.org.nz Ref: **05Standard1**)

AS ISO 14064.2-2006: Greenhouse gases - Specification with guidance at the project level for quantification and reporting of greenhouse gas emission reductions and removal enhancements (ISO 14062-2:2006, MOD).
(To register your interest email library@energylibrary.org.nz Ref: **05Standard2**)

AS ISO 14064.3-2006: Greenhouse gases - Specification with guidance for the validation and verification of greenhouse gas assertions.
(To register your interest email library@energylibrary.org.nz Ref: **05Standard3**)

New Health and Safety DVDs

These are from the Australian Vocam Premium Series, ranging in date from 2002 - 2005.

- A. Building Site Accident Prevention**
- B. Confined Space Communication and Awareness**
- C. Confined Space Entry**
- D. Construction Safety Essentials**
- E. Fire Safety for Industry**
- F. Hand Aware**
- G. Height Safety Essentials**
- H. Industrial Ergonomics**
- I. Leading the Way: Skills for Supervisors**
- J. Lockout/Tagout: Making it Safe**
- K. Manual Handling for Industry : A New Approach**
- L. Noise and You**
- M. Off-Hand Grinding Safety**
- N. Office Ergonomics**
- O. Office Manual Handling : The New Approach**
- P. Powered Hand Tool Safety**
- Q. Risk Assessment for Industry**
- R. Risk Assessment for the Office**
- S. Understanding Safety at Work**
- T. Understanding Safety in the Office**

(To borrow any of these DVDs [email us](mailto:library@energylibrary.org.nz) Ref: **05DVD + the relevant letter**)

Reports

Market trading experiments of Co2 emission permits and electric power among virtual Japanese utilities. (2002) T. Ohkawara. Tokyo: Central Research Institute Of Electric Power Industry.

This study utilised a virtual program to investigate market behaviour for electronic trading of CO2 emission and electric power over the internet under a selection of conditions. Factors that may influence trading behaviour in a real economy are identified. (To borrow this report email library@energylibrary.org.nz Ref: **05CRIEPI**)

The path to power: Delivering confidence in Britains's wave and tidal stream industry. (2006) London: British Wind Energy Association (BWEA)
(This report is [online](#) or you can [borrow](#) our copy Ref: **05Path**)

Our energy challenge: securing clean affordable energy for the long-term. (2006) London: British Wind Energy Association (BWEA).
A 43 page submission in response to the 2006 UK Government Energy Review.
(This report is [online](#) or you can [borrow](#) our copy Ref: **05Challenge**)

New Management and Marketing Articles

Constructive cynicism. Keiningham, Timothy L. and others. *Marketing Management*, Nov/Dec2006, Vol. 15 Issue 6, p29-35
The authors argue that it is dangerous for companies to blindly adopt new business management practices such as diversification and strategic downsizing just because they have worked for a small number of companies. Many of these practices have not been subjected to rigorous scientific tests.
(For a copy of this article email library@energylibrary.org.nz Ref: **05Timothy**)

KEITH TURNER. Jayne, Vicki. *New Zealand Management*, Mar 2007, Vol. 54 Issue 2, p44-47
An article about Keith Turner, CEO of Meridian Energy.
(For a copy of this article email library@energylibrary.org.nz Ref: **05Jayne**)

Inner work life. Amabile, Teresa M. and Kramer, Steven J. *Harvard Business Review* Vol. 85 (5), May 2007 p72-83.
Employees have their good days and their bad days and, for the most part, the reasons for their ups and downs are unknown. Most managers simply shrug their shoulders at this fact of work life. But does it matter, in terms of performance, if people have more good days than bad days? The authors' new stream of research reveals the dramatic impact of employees' inner work lives their perceptions, emotions, and motivation levels--on several dimensions of performance.
(For a copy of this article email library@energylibrary.org.nz Ref: **05Amabile**)

Silo busting. Gulati, Ranjay. *Harvard Business Review* Vol. 85 (5), May 2007 p98-108.

For many senior executives, shifting from selling products to selling solutions--packages of products and services--is a priority in today's increasingly commoditized markets. Companies, however, aren't always structured to make that shift. Knowledge and expertise often reside in silos, and many companies have trouble harnessing their resources across those boundaries in a way that customers value and are willing to pay for. Some companies have restructured themselves around customer needs to deliver true solutions.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Gulati**)

The power of social networks. Kleinberg, Jon. *Gallup Management Journal Online*; 3/8/2007, p1, 6p

Jon Kleinberg is a mathematician at Cornell University. This article is an interview with him about the effectiveness of viral marketing.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Jon**)

Seven sees. Hendery, Simon. *NZ Marketing Magazine*; Mar 2007 Vol 26 (2) p24-31

This article examines developments in "out of home" advertising in New Zealand.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Hendrey**)

High-performing (and threshold) competencies for group facilitators. Stewart, Jean-Anne. *Journal of Change Management*, Dec 2006, Vol. 6 Issue 4, p417-439

Based on the results of a doctoral research study, this paper introduces a set of ideal competencies for group facilitators.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Stewart**)

New Energy Articles

Renewable energy - sustainable economy? Dominick Cook. In: *Renewable Energy 2006* (p52-57). London: Sovereign.

The author compares the costs of electricity generation from the following sources: wind, biomass, wave, tidal, gas-fired combined cycle gas turbine, coal pulverized fuel, coal IGCC, nuclear.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Cook**)

Wind energy research progress in the USA. Robert Thresher and others. In: *Renewable Energy 2006* (p58-62). London: Sovereign.

Where to now for wind power?

(For a copy of this article email library@energylibrary.org.nz Ref: **05Thresher**)

Carbon without compulsion. Cundy, Christopher. *Environmental Finance* Feb 2007 Volume 8, Number 4 p.S4 - S7 (3 p)

Discusses the need for credibility and transparency in the fast growing carbon market.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Cundy**)

Material, price and power. Expect exciting developments from solar components' suppliers in the coming months and years. Gail Purvis. *Refocus*; Volume 8, Issue 1, January 2007, Pages 42-44,46-47

Set against the backdrop of silicon supply problems, reFOCUS investigates what the way forward holds for PV; Gail Purvis takes a look at some of the technologies hoping to take centre stage.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Purvis**)

Living with wind power in Germany. *Modern Power Systems* Vol. 27 Issue 3, Mar 2007 p25-28

20,900-megawatt of wind turbine capacity was installed by the end of 2006 in Germany. If wind power continues to grow then network reinforcement will be needed to prevent grid congestion. This paper describes the findings of a study commissioned by The German Energy Agency (DENA) which investigates the future impact of wind on the grid.

(For a copy of this article email library@energylibrary.org.nz Ref: **05MPS**)

The rearguard of modernity: Environmental skepticism as a struggle of citizenship. Jacques, Peter. *Global Environmental Politics*; Feb 2006, Vol. 6 Issue 1, p76-101

What causes environmental skepticism and why is it such a threat toward attempts to mitigate global environmental crises?

(For a copy of this article email library@energylibrary.org.nz Ref: **05Peter**)

25 ways to go green without going insane. Ben Kallen and others. *Los Angeles Magazine*; Mar 2007, Vol. 52 Issue 3, p118-127

(For a copy of this article email library@energylibrary.org.nz Ref: **05Kallen**)

Creating harmony. Barroso, L.A. and others. *IEEE Power and Energy Magazine*; 4 (4) 2006, p. 32-46

There is mounting opposition to the construction of new hydropower and fossil-fuel plants in Brazil and Chile as the public becomes more environmentally-conscious.

How will these countries balance the necessary growth of energy supply with these concerns?

(For a copy of this article email library@energylibrary.org.nz Ref: **05Barroso**)

Skinless wall panels. *Energy Design Update*; Vol. 27 Issue 3, Mar 2007 p11-15

The article evaluates several skinless wall panels including products from Energy Wise Systems, Kama and Nascor Inc.

(For a copy of this article email library@energylibrary.org.nz Ref: **05EDU**)

Where are the sky's limits? Evans, David A. and Kruger, Joseph A. *Environment*; Mar 2007, Vol. 49 Issue 2, p18-32

Describes Chicago's emissions cap-and-trade program, one of the tools in the fight against "smog".

(For a copy of this article email library@energylibrary.org.nz Ref: **05Evans**)

Estimation of methane and nitrous oxide emission from livestock and poultry in China during 1949–2003. J.B. Zhou and others. *Energy Policy* Vol 35, Issue 7 (July 2007) p3759-3767

To investigate the greenhouse gas emission from enteric fermentation and manure management of livestock and poultry industry in China, this study presents a systematic estimation of methane and nitrous oxide emission during 1949–2003, based on the local measurement and IPCC guidelines.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Zhou**)

The world's 'coolest' towns? Paul Kingsnorth. *The Ecologist*; Apr 2007 Vol 37(3) p35-40

Describes what some proactive communities around the world are doing in order to become carbon neutral or sustainable. Examples of projects include home energy audits, mass transit systems and zero waste initiatives.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Kingsnorth**)

Fuel cell town - a feasibility study. Madni, Iftikhar. *Cost Engineering*; Mar 2007, Vol. 49 Issue 3, p17-23

Is it possible to run a town with a population of 1,600 using only fuel cells?

(For a copy of this article email library@energylibrary.org.nz Ref: **05Madni**)

Sustainable energy? A feasibility study for Eastside, Birmingham, UK. Hunt, Jefferson; Jankovic, Hunot. *Proceedings of the Institution of Civil Engineers: Engineering Sustainability*; Volume 159, Number 4 (December 2006) p155 - 168

This paper describes a regeneration programme in a large brownfield site in Birmingham. The authors estimate the total energy demands from the various developments planned and assess the feasibility of introducing various renewable energy supply technologies and combined heat and power (CHP) technologies. Also presented is a simplified costing scheme for assessing the potential of renewable technologies to secure energy supplies while limiting carbon emissions.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Hunt**)

Sustainable construction in New Zealand. Ailsa Ceri Warnock. *New Zealand Journal of Environmental Law*; Volume 9, 2005, p337-376

(For a copy of this article email library@energylibrary.org.nz Ref: **05Warnock**)

Using recycled construction waste as aggregates for paving blocks. D. Chan and C. S. Poon. *Proceedings of the Institution of Civil Engineers: Waste and Resource Management*; Volume 159, Number 2 (May 2006), p83-91

The use of paving blocks made from recycled materials, in particular recycled concrete aggregate derived from demolition waste streams, has gained a wider acceptance in Hong Kong. However, the use of wastes generated from building activities is generally considered unsuitable for this application. This paper describes a study on the use of construction waste in the production of paving blocks for residential applications.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Chan**)

Income distribution impacts of climate change mitigation policy in the Susquehanna River Basin Economy. Gbadebo Oladosu and Adam Rose

Energy Economics Volume 29, Issue 3 (May 2007) p520-544

The authors examine the cost-side income distribution impacts of a carbon tax in the Susquehanna River Basin (SRB) Region of the United States utilizing a computable general equilibrium model.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Rose**)

Regulation of suspended particulate matter (SPM) in Indian coal-based thermal power plants: A static approach. Ishita Sengupta. *Energy Economics*; Volume 29, Issue 3, May 2007, p479-502

This study aims to find the best policy, which would induce the Indian coal-based power plants to abate particulate emissions in the most cost effective way.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Ishita**)

Development of a ground-source heat pump system with ground heat exchanger utilizing the cast-in-place concrete pile foundations of buildings

Kentaro Sekine and others. *ASHRAE Transactions*; Vol. 113, Part 1, 2007. p558-566

(For a copy of this article email library@energylibrary.org.nz Ref: **05Sekine**)

Policies for material and energy efficiency gains in small and medium enterprises. Takahashi, Taeko and others. *International Review for Environmental Strategies*; 2007, Vol. 7 Issue 1, p81-96

With governments providing the right direction, small and medium enterprises in Asia will be able to make much-needed improvements in resource efficiency.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Taeko**)

Supply security and short-run capacity markets for electricity. Anna Creti and Natalia Fabra. *Energy Economics*; Volume 29, Issue 2, March 2007, p259-276

The creation of electricity markets has raised the fundamental question as to whether markets create the right incentives for the provision of the reserves needed to maintain supply security in the short-run, or whether some form of regulation is required. In some states in the US, electricity distributors have been made responsible for providing such reserves by contracting capacity in excess of their forecasted peak demand. The so-called Installed Capacity Markets provide one means of contracting reserves.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Creti**)

Optimizing demand-side bids in day-ahead electricity markets. Philpott, A.B. and Pettersen, E. *IEEE Transactions on Power Systems*; May 2006 Vol 21, Issue 2, p488-498

(For a copy of this article email library@energylibrary.org.nz Ref: **05Philpott**)

Demand response and electricity market efficiency. Kathleen Spees and Lester B. Lave. *The Electricity Journal*: Volume 20 (3), April 2007 p.69-85

Customer response is a neglected way of solving electricity industry problems. Historically, providers have focused on supply, assuming that consumers are unwilling or unable to

modify their consumption. Contrary to these expectations, customers respond to higher prices that they expect to continue by purchasing more efficient appliances and taking other efficiency measures.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Lave**)

The impacts of price responsiveness on strategic equilibrium in competitive electricity markets. Ettore Bompard and others. *International Journal of Electrical Power & Energy Systems*; Vol 29 (5) June 2007. Pages 397-407

One of the most important aspects that may affect market welfare is that related to the low demand responsiveness to price. This situation may greatly impact the market performance causing low efficiency, high prices and a disproportional allocation of surpluses.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Bompard**)

Does a municipal electric's supply of communications crowd out private communications investment? An empirical study. George S. Ford. *Energy Economics*; Volume 29, Issue 3 (May 2007) p467-478

There are 2007 municipalities across the United States providing electricity service to their constituents. Of these, over 600 provide some sort of communications services to the community. An important policy question is whether or not public investment in communications crowds out private investment or whether such investment encourages additional entry by creating wholesale markets and economic growth.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Ford**)

Generator maintenance scheduling in power systems using metaheuristic-based hybrid approaches. Keshav P. Dahal and Nopasit Chakpitak. *Electric Power Systems Research*; Volume 77 (7), May 2007, p771-779

The effective maintenance scheduling of power system generators is very important for the economical and reliable operation of a power system. This represents a tough scheduling problem which continues to present a challenge for efficient optimization solution techniques.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Dahal**)

Managing risk in a large rural electrification programme in India. Bhattacharyya, Subhes C. and Dey, Prasanta K. *Impact Assessment & Project Appraisal*; Mar 2007, Vol. 25 Issue 1, p15-26.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Dev**)

Private wires, local generation, ESCOs and renewables in the energy network. Keith Melton. *Energy World*; No. 346 (Feb 2007) p12-14

(For a copy of this article email library@energylibrary.org.nz Ref: **05Melton**)

Adaptive Prony method for waveform distortion detection in power systems . A. Bracale and others. *International Journal of Electrical Power & Energy Systems* Vol 29 (5) June 2007. p371-379

IEC Standards characterize the waveform distortions in power systems with the amplitudes of harmonic and interharmonic groupings calculated by using the waveform spectral components obtained with a 5 Hz frequency resolution DFT. In some cases the power system waveforms are characterized by means of spectral signal components that the DFT with 5 Hz frequency resolution is unable to capture accurately. In this paper a new Prony method is proposed to calculate the harmonic and interharmonic subgroups. (For a copy of this article email library@energylibrary.org.nz Ref: **05Bracale**)

Nonlinear coordinated control design of excitation and STATCOM of power systems. Lihong Gu and Jie Wang. *Electric Power Systems Research*; Volume 77 (7), May 2007, p788-796

This paper presents a nonlinear control scheme for designing the coordinated STATCOM and excitation controllers to enhance the transient stability of power system.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Gu**)



Opportunities ('costs) matter: A comment on Pimentel and Patzek "Ethanol production using corn, switchgrass, and wood; biodiesel production using soybean and sunflower". Justus Wesseler. *Energy Policy*; Volume 35, Issue 2, February 2007, p1414-1416

The energy balance for different crops reported by Pimentel and Patzek ignores opportunity costs. Including opportunity costs substantially changes the results and leads to different conclusions.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Justus**)

Biodiesel: A new Oildorado? Manuel Frondel and Jörg Peters. *Energy Policy*; Volume 35, Issue 3, March 2007, p1675-1684

Guaranteeing tax reductions and exemptions, the European governments intend to increase the share of biofuels in total EU fuel consumption to 5.75% by 2010. The financial support of this EU objective is frequently justified by expected positive environmental impacts, most notably the mitigation of climate change, and by favorable employment effects in the agricultural sector. This paper investigates the environmental and economic implications of the support of rapeseed-based biodiesel as a substitute for fossil diesel.

(For a copy of this article email library@energylibrary.org.nz Ref: **05Frondel**)

Transesterification kinetics of soybean oil for production of biodiesel in supercritical methanol. Huayang He and others. *JAOCS, Journal of the American Oil Chemists' Society*; Apr 2007. Vol. 84, (4), p. 399-404

(For a copy of this article email library@energylibrary.org.nz Ref: **05He**)

Food for Thought

Last month's cryptic clue question was: What measure of electricity would require us to walk to it in confusion? The answer was Kilowatt (it's an anagram of "walk to it")

An easier question this month.....

To be in to win a king-size bar of energy chocolate [email Kat McAra](mailto:Kat@energylibrary.org.nz) with the answer to the following: In which African country would you find Tesfai Ghebreselassie, Minister of Energy and Mines?

Draw closes 4pm on Friday 8th June.



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