

Energy Library update May 2006

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Contents

[Featured Energy Library Journals](#)
[New books, standards and reports](#)
[Standards Watch](#)
[Reports and Journal Articles](#)
[Web resources](#)
[Food for thought](#)

Featured Energy Library Journals

Electric Light & Power

Published six times a year, Electric Light & Power covers industry news, financial, legal and regulatory issues and [more...](#) The publisher also produces a twice monthly e-newsletter of industry news and trends (business and technology). You can sign yourself up for no charge. Circulation and table of contents services are available for this journal.
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Carbon Finance (potential new Energy Library subscription)

[Carbon Finance](#) is a monthly newsletter which provides in-depth coverage of the global markets in greenhouse gas emissions. It has articles on carbon pricing, how to prepare for a carbon restrained future, GHG trading schemes, opportunities to reduce or offset emissions and more. Email kmcara@energylibrary.org.nz if you would be interested in seeing this title on circulation. If enough members are keen we will be able to buy a subscription and circulate it.

New books, standards and reports

Energy Policies of IEA Countries: New Zealand 2006 Review

International Energy Agency, Paris 2006

Discusses the organisation of the review and explains how the review was undertaken after discussion with various energy and environment stakeholders. Provides a summary of conclusions and recommendations from the results of the in-depth review. Provides a general energy policy overview and also covers policies relating to energy efficiency, new and emerging renewables, fossil fuels, electricity, research and development. Includes energy balances and key statistical data.

(To borrow this book email library@energylibrary.org.nz)

Gas, Power & People: Energy supply in Hutt Mana 1880-2005 Reilly, H.

Steele Roberts, Wellington 2005

Contains a history of energy supply in the wider Hutt Valley and the people involved in the industry from the period 1880-2005. Includes chapters on investment in energy supply 1965-85 and the reform of energy supply from 1985-2005 in the Hutt Valley wider area.

(To borrow this book email library@energylibrary.org.nz)

Biodiesel : the comprehensive handbook Martin Mittelbach, Claudia Remschmidt

Martin Mittelbach, Graz 2004

This handbook contains information for biodiesel users, producers and interested people from the fields of science, technology, agriculture, energy research and the environment.

(To borrow this book email library@energylibrary.org.nz)

AS/NZS 61000.4.15 : 2005 Electromagnetic capability (EMC) Part 4.15 : Testing and measurement techniques - Flickermeter - Function and design specifications

(To borrow this standard email library@energylibrary.org.nz)

IEEE 400.2 : 2004. IEEE guide for field testing of shielded power cable systems using very low frequency (VLF)

(To borrow this standard email library@energylibrary.org.nz)

Standards Watch

If you frequently refer to New Zealand standards in your work you may be curious to know how they are developed. Here's an [outline](#) of the process.

Reports and Journal Articles**Accounting for fuel price risk when comparing renewable to gas-fired generation: The role of forward natural gas prices** Bolinger, M., Wiser, R., Golove, W.

(2006) Energy Policy, 34 (6), Pages 706-720.

(To receive a copy of this article email library@energylibrary.org.nz)

Planting seeds on the forecourt Bulleid, R. Environmental Finance Feb 2006 vol 7(4) p.18-20

This article discusses the potential of biodiesel and bioethanol and asks if they can become truly viable.

(This article is [freely available](#) on the Environmental Finance website).

Burning a path to the future Atkins, J. Environmental Finance Feb 2006 vol 7(4) p.22-25

This article outlines possibilities and problems for the future of biomass power as a major energy source for the European Union.

(To receive a copy of this article email library@energylibrary.org.nz)

Co-firing drives European biopower Klein, A. and Spillati, C. Environmental Finance Feb 2006 vol 7(4) p.26-27

Is biomass-based power generation living up to expectations?

(To receive a copy of this article email library@energylibrary.org.nz)

Power Play Bone, A. (2006) New Zealand Listener, April 22 vol 203 (3441), Pages 24-27
This article outlines the pros and cons of various renewable energy sources that could potentially help with future power shortages in New Zealand. It explains that the need to find alternative energy sources is getting more urgent as demand for electricity grows.
(This article is [freely available](#) on the Listener website).

System operation with high wind penetration Eriksen, P.B.; Ackermann, T.; Abildgaard, H.; Smith, P.; Winter, W.; Rodriguez Garcia, J.M. IEEE Power & Energy Vol 3(6) 2005 p.65- 74
Discusses four European countries which have high wind power penetration and how this affects system stability. Explains that there is a lack of dynamic models in transient stability programs, a problem worsened by the variation in turbine technology design.
(To receive a copy of this article email library@energylibrary.org.nz)

The future of wind forecasting and utility operations Ahlstrom; Jones, L.; Zavadil, R.; Grant, W. IEEE Power & Energy Vol 3(6) 2005 p.57-64
Describes how we can best utilise wind forecasting in control rooms and systems to ensure wind energy is cost effective.
(To receive a copy of this article email library@energylibrary.org.nz)

Using Waste Heat for Energy Savings Edward Temos.
ASHRAE Journal. Apr 2006.Vol.48, Iss. 4; pg. 28, 6 pgs
(To receive a copy of this article email library@energylibrary.org.nz)

Energy Stewardship Lee C Tapper. Energy Engineering. 2006.Vol.103, Iss. 2; pg. 45, 7 pgs
(To receive a copy of this article email library@energylibrary.org.nz)

Managing Generation Y. Kehrli, Sommer and Sopp, Trudy
HR Magazine; May 2006, Vol. 51 Issue 5, p113-119
(To receive a copy of this article email library@energylibrary.org.nz)

Your loyalty program is betraying you / Joseph C Nunes and Xavier Dreze.
Harvard business review, April 2006 p4-131
(To receive a copy of this article email library@energylibrary.org.nz)

Manage customer-centric innovation systematically / Larry Selden and Ian C.MacMillan
Harvard business review, April 2006 p.108-116
(To receive a copy of this article email library@energylibrary.org.nz)

Short-cut piping costs / Gael D Ulrich and Palligarnai T Vasudevan.
Chemical engineering, March 2006 p44-49
(To receive a copy of this article email library@energylibrary.org.nz)

Consider alternative fuels to cut costs / Thomas F.McGowan
Chemical engineering, March 2006 p58-61
(To receive a copy of this article email library@energylibrary.org.nz)

Australia's oil self-reliance may falter without new discoveries / Rick Wilkinson

Oil and gas journal, 6 March, 2006 p20-25

(To receive a copy of this article email library@energylibrary.org.nz)

Mechanical behaviour of high-head Francis turbines / A. Coutu (and others)

Hydropower and dams, Issue one, 2006 p108-111

(To receive a copy of this article email library@energylibrary.org.nz)

The relationship between water quality and GHG emissions in reservoirs A Tremblay and R. Schetagne.

Hydropower and dams, Issue one, 2006 p103-107

(To receive a copy of this article email library@energylibrary.org.nz)

Beginning the transformation: When will efficient, high-temperature fuel cells finally emerge as the best choice for electrical generation? Williams, M. and Samuelsen, S. (2006)

May, Vol. 128, Iss. 5; p. 40

This article is [freely available](#) on the Mechanical Engineering website.

Victorian Solar Hot Water Rebate Program: Review of outcomes 2000 - 2004

K. I. Guthrie, R. Hines, S. Stockwell and A. Doddathimmaiah, Sustainability Victoria Melbourne

(This is [freely available](#) on the New Zealand Solar Industry Association Website).

Oldies and goodies from the Energy Library collection**Electric cables handbook**

edited by G.F. Moore. 3rd edition. Blackwell Science, 1997.

Covers all types of energy cables, from wiring and flexible cables for general use, to distribution, transmission and submarine cables. It includes information on materials, design principles, installation and standards.

(To borrow this book email library@energylibrary.org.nz)

Modelling prices in competitive electricity markets

edited by Derek SW. Bunn. Wiley, 2004.

Electricity markets are structurally different to other commodities. Provides econometric analysis of wholesale power markets around the world, their particular characteristics, and assesses the applicability of various methods of price modeling.

Themes:- Prices and strategic competition; Spot market dynamics; Spatial price interactions; Forward prices; Forecasting and risk management.

(To borrow this book email library@energylibrary.org.nz)

Handbook on mechanical works inspection : a guide to effective practice

Clifford Matthews. Mechanical Engineering Publications, 1997

Provides the techniques, guidelines and technical data needed to perform inspections on mechanical equipment found in power and process plant applications.

(To borrow this book email library@energylibrary.org.nz)

Handbook of mechanical in-service inspection: pressure systems and mechanical plant

Clifford Matthews. Professional Engineering Publishing, 2004

This comprehensive sister volume to Cliff Matthews' highly successful Handbook of Mechanical Works Inspection gives a detailed coverage of pressure equipment and other mechanical plant such as cranes and rotating equipment.

(To borrow this book email library@energylibrary.org.nz)

Web resources**New Zealand****Parker coy on electricity shake-up**

The IEA report discussed in [this article](#) is available for loan (see the "New books, standards and reports" section of this Energy Library Update). See also [David Parker's response](#) to the report.

The Electricity Commission has [rejected](#) the 400 kV transmission line between Whakamaru and Auckland and Transpower has [responded](#).

[Business leaders support climate friendly cars](#) and Government launches new [Fuelsaver website](#). Read [more](#) on the launch.

Harry Duynhoven recently [addressed](#) the Energy Trusts of New Zealand 2006 Conference. He covered hydro lake levels, electricity conservation, investment in electricity generation, gas exploration, climate change policy, regulation of electricity retailers, issues inherent in wind power and plans for a National Energy Strategy. He referred to a [discussion paper](#) announced in April by the then Acting Minister of Energy Trevor Mallard which looks at options to enable electricity lines companies to invest more in generation (submissions close 25 May).

In late April EECA presented a one day conference focusing on biodiesel and bioethanol, and their place in New Zealand's transport energy future. You can access the talks and presentations from the conference [here](#).

They say this could be the world's first [commercial production of biodiesel](#) from algae outside the laboratory and its happening in the sewage ponds in Marlborough, New Zealand. The exact technology is being kept a secret by Aquaflo Bionomic Corporation.

The [Centre for Advanced Engineering](#) (CAE) is a not-for-profit organisation based at the School of Engineering at the University of Canterbury. An example of a CAE publication is energy21news (The News Journal for Distributed Energy Resources). The latest issue is [April 2006](#). CAE is currently promoting a [DG workshop](#).

Two conferences coming up in July are the Institute for International Research's [Securing New Zealand's ENERGY Future](#) and the [8th Annual New Zealand Energy Summit](#).

International

Big changes at the Institution of Electrical Engineers

The Institution of Electrical Engineers and the Institution of Incorporated Engineers have merged to form the Institution of Engineering and Technology. The new Institution was launched in London in March this year and will have more than 150,000 members worldwide. Find out more [here](#).

The [world's largest solar power plant](#) was officially opened in Germany recently. Germany has nine of the top 10 largest photovoltaic plants in the world.

Creation of an [undersea energy grid](#) has been proposed by Aircity, an Irish Company to link a series of wind farms. ABB (their project partner) will use a transmission technology called HVDC Light which is used for demanding offshore applications. HVDC Light feeds electricity to platforms and also connects and supports the integration of electrical networks

Twelve US sites are being evaluated for the construction of [the world's cleanest coal plant](#). FutureGen is a US\$1 billion public-private partnership to design, build, and operate the coal-fueled, "zero emissions" power plant. A paper called "[FutureGen Program pathway to zero emissions](#)" was presented at the DOE Carbon Sequestration Conference, May 2006.

The [SmartWay Transport Partnership](#) is a voluntary collaboration between U.S. EPA and the freight industry designed to increase energy efficiency while significantly reducing greenhouse gases and air pollution

The heat was on to make an historic Frank Lloyd Wright building more environmentally comfortable—it was too cold in the winter and too hot in the summer. Geothermal energy was used for the [recent restoration](#).

Green Building Survey Shows 20% Growth in 2005, 30% in 2006. Read more [here](#). A new [website](#) dedicated to the green building industry has already been launched.

Check out [Real Hybrid Mileage Database](#), which illustrates MPG realized by everyday drivers of the Toyota Prius, Honda Civic Hybrid, and other vehicles. But are hybrid cars really green? An [article](#) on the Guardian website suggests otherwise.

Recognising that greenhouse gasses are emitted in the manufacture of hybrid electric vehicles Ford has launched a pilot [Customer Carbon Offset Program](#). Another [fuel economy site](#) is the result of a combined effort by the U.S. Department of Energy and the U.S. Environmental Protection Agency.

Food for thought

For something a little bit different check out [Where art and electricity meet](#) (some shockingly creative stuff).