

## Energy Update

February 2010

Welcome to the latest issue of the Energy Update, a monthly round-up of books, articles, standards, reports and other resources available from the Energy Library collection.

This month we feature a [special section on substations](#). The Update highlights just a snippet of what we can provide; please don't hesitate to contact us if you would like help with anything you are working on.

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*Kat McAra, Current Awareness Advisor*

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## New Items for Loan

**Advanced metering infrastructure: Enabling New Zealand's smart grid.** Peter Thornbury. Wellington: Freeman Media Ltd, 2009  
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**Welfare analysis of abolishing provisional gasoline tax rate - Spatial computable general equilibrium approach.** Bunditsakulchai, P; Hitomi, K. Tokyo: Central Research Institute of Electric Power Industry (CRIEPI), 2009  
(To borrow this report email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Loan2**)

**Improvements of a steady-state calculation algorithm for electromagnetic transient simulations of power systems.** Lian, K-L; Noda, T. Tokyo: Central Research Institute of Electric Power Industry (CRIEPI), 2009  
(To borrow this report email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Loan3**)

**Marine Energy Supplement 2009** – This supplement to *International Journal on Hydropower & Dams* contains 14 articles, including:

- An overview of tidal power potential and prospects
- Russian tidal and wave power development: Experience of the Kislogubskaya tidal plant
- Ecological aspects of tidal powerplants
- Tidal current energy development in the Southeast Asia region

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**Sustainability as competitive advantage.** This special section in the Fall 2009 issue of *MIT Sloan Management Review* contains 7 articles, including:

- 8 reasons sustainability will change management (that you never thought of).
- Long-viewed, see-through, collaborative and retooled.
- The mini-cases: 5 companies, 5 strategies, 5 transformations.
- What executives don't get about sustainability (and further notes on the profit motive).

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**Energy sector pricing and macroeconomic dynamics.** This Nov 2009 issue of *Energy Economics* contains 9 articles, including:

- Expectations, learning, and the changing relationship between oil prices and the macroeconomy
- Commodity prices, interest rates and the dollar
- Variable capacity utilization, ambient temperature shocks and generation asset valuation
- Generators' bidding behavior in the NYISO day-ahead wholesale electricity market

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## New Management, Marketing and HR Articles

**How BMW is defusing the demographic time bomb.** Loch, C. H. et al. *Harvard Business Review*; Mar 2010, Vol. 88 (2), p.99-102

This article describes how German car manufacturer BMW is managing the effects of population aging on the industry. BMW's factories have been redesigned to accommodate older workers and increase productivity.

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Aging**)

**The wind of change.** Cook, N. *Occupational Safety and Health (RoSPA)*; Jan 2010 Vol. 40 (1), p.25-29

Discusses occupational health and safety issues for workers on wind farms.

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Safety**)

**New standard citations tighten compliance in hazardous areas.** Murphy, Colin. *Electrolink*; (76) Dec 2009 - Feb 2010, p.30 (1p.)

Discusses developments in New Zealand electrical safety standards.

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**Noise problems in a call centre: A case study.** Sözen, M. Ş. et al. *Building Acoustics*; Dec 2009, Vol. 16 (4), p.329-342  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Call**)

**Impact of performance management reviews: Evidence from an energy supplier.** Martinez, V; Kennerley, M. *Management Services*; Winter 2009, Vol. 53 (4), p.12-21  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Review**)



**Ten of the best.** Atkins, A. *Employment Today*; (141) Sep/Oct 2009, p.34-37  
This article sums up the ideas in each of ten popular management books. The books discussed are: Fish!; Who Moved My Cheese?; The One Minute Manager; The Leadership Challenge; Getting to Yes; The 7 Habits of Highly Effective People; How to Win Friends and Influence People; Blink; Good to Great; Leading Change.  
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**Are your subordinates setting you up to fail?** Manzoni, J-F; Barsoux, J-L. *MIT Sloan Management Review*; Summer 2009, Vol. 50 (4), p.43-51  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Fail**)

**The long conversation: Learning how to master enterprise systems.** Lorenzo, Oswaldo et al. *California Management Review*; Fall 2009, Vol. 52 (1), p.140-166  
Enterprise systems discussed include those offered by SAP and Oracle. The experiences of eight different companies (including telecommunication and engineering firms) are presented.  
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**Leveraging the true value of legacy customer information systems.** Dunlea, M. *Management Quarterly*; Summer 2009, Vol. 50 (2), p.10-15  
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**Ten steps for evaluating and selecting software and service providers.** This Jan/Feb 2010 *Information Management* article is [online](#).

**Navigating social media in the business world.** Brennan, V. *Licensing Journal*; Jan 2010, Vol. 30 (1), p.8-12  
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**An industry standard risk analysis technique.** Bahill, A. Terry; Smith, Eric D. *Engineering Management Journal*; Dec 2009, Vol. 21 (4), p.16-29  
This article discusses common mistakes in risk analysis and risk management in engineering project management. The authors explain how to mitigate these errors.  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Risk**)

**The evolution of tender contracts.** Fellowes, C. *Institution of Civil Engineers. Proceedings - Management, Procurement and Law*; Nov 2009 Vol. 162 (4), p.147 -150  
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## New Energy and Environment Articles

**An integrated approach to energy prospects for North America and the rest of the world.** Andrea M. Bassi et al. *Energy Economics*; Vol. 32 (1), Jan 2010, p.30-42

Many international organizations and research institutions have released recently unequivocal scenarios on energy's future prospects. The peak in global oil production is likely to happen in the next ten to fifteen years, if it hasn't already happened, and decisions to be made in the near future are likely to have large impacts on our quality of life in the coming decades. This study presents an integrated tool for national energy planning customized to North America. The authors analyzed the impact of world oil production on economic, social and environmental indicators. Two cases of global ultimate recoverable oil reserves are considered, a low and medium estimate within current research. Three sets of policy directions were chosen: Business As Usual (Market Based), Maximum Push for Renewables, and Low Carbon Emissions. Results of the simulations show that without restrictions on emissions coal becomes the dominant energy in the longer term. On the other hand, if US policymakers are able to effectively implement the necessary policies, such as a 20% RPS by 2020 and increased CAFE Standards, along with increased energy conservation and efficiency, the medium to longer-term economic impacts of a global peak in oil production can be mitigated, while a sustained reduction in emissions would require a larger effort.

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Energy**)

**Extreme oil: Scraping the bottom of Earth's barrel.** Strahan, David. *New Scientist*; 12/5/2009, Vol. 204 (2737), p.34-39

This [online](#) article is by the author of the 2007 book, "The last oil shock: A survival guide to the imminent extinction of petroleum man", which you can [borrow](#) from Energy Library.

**Targeting plug-in hybrid electric vehicle policies to increase social benefits.** Steven J. Skerlos; James J. Winebrake. *Energy Policy*; Vol. 38 (2), Feb 2010, p.705-708

In 2009 the U.S. federal government enacted tax credits aimed at encouraging consumers to purchase plug-in hybrid electric vehicles (PHEVs). These tax credits are available to all consumers equally and therefore do not account for the variability in social benefits associated with PHEV operation in different parts of the country. The tax credits also do not consider variability in consumer income. This paper discusses why the PHEV subsidy policy would have higher social benefits at equal or less cost if the tax credits were offered at different levels depending on consumer income and the location of purchase. Quantification of these higher social benefits and related policy proposals are left for future work.

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**Now is the time for action: Transitions and tipping points in complex environmental systems.** Stafford, Susan G. et al. *Environment*; Jan/Feb 2010, Vol. 52 (1), p.38-45

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**COP15 ends with "meaningful," but contentious, agreement.**

*Business & the Environment with ISO 14000 Updates*; Jan 2010,  
Vol. 21 (1), p.1-4

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**Looking for answers.** Reina, P. et al. *Engineering News Record (ENR)*;  
28 Dec 2009 Vol. 263 (20), p.82-83

Engineers see opportunities in promoting low-carbon development to fill  
void left by climate-change summit.

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**Green infrastructure: Bridging the gap towards a sustainable national infrastructure strategy.** McKenzie, Bruce. *Planning Quarterly*; Dec 2009 (175), p.10-12

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**ISO greenhouse gas standards overview.** *Business & the Environment with ISO 14000 Updates*; Vol. 20 (12), Dec 2009, p.12-14

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**Energy and greenhouse gas impacts of mining and mineral processing operations.** T. Norgate; N. Haque. *Journal of Cleaner Production*; Vol. 18 (3), Feb 2010, p.266-274

Life cycle assessments of the mining and mineral processing of iron ore, bauxite and copper concentrate were carried out, focussing on embodied energy and greenhouse gas emissions. The results showed that loading and hauling make the largest contributions to the total greenhouse gas emissions for the mining and processing of iron ore and bauxite. In the case of copper ore, the crushing and grinding steps make the largest contribution to the total greenhouse gas emissions for the production of copper concentrate. These results indicate that efforts to reduce the increased greenhouse gas emissions from mining and mineral processing, anticipated in the future as a result of falling ore grades and more finer-grained deposits, should focus on loading and hauling for iron ore and bauxite, while for copper ore the focus should be on grinding. There are a number of new and emerging technologies that could be expected to assist in this task, and these include high pressure grinding rolls and stirred mills for grinding, and further advances in diesel engine technology for loading and hauling applications.

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**Renewable energy rebates can positively impact market penetration of renewable energy technologies.** *Air Pollution Consultant*; 2009, Vol. 19 (6), p.1.10-1.13

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Rebates**)

**The promise of thin-film solar.** Heckerth, S. *Mother Earth News*; Feb/Mar 2010 (238), p.44-48

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**Winery wastewater treatment plants can switch to solar energy and save.** Gough, Harvey. *Australian & New Zealand Grapegrower & Winemaker*; 01/11/2009 (550), p.90-93  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Waste**)

**Greening electricity production: A success story of multilevel governance convergence and innovation.** Dinica, Valentina. *Energy & Environment*; 2008, Vol. 19 (6), p.787-802

This paper analyzes the diffusion of wind power in Spain from the perspective of the multi-level governance features that contributed to the outcomes observed so far. Public authorities at all governance levels designed strategies that converged to reinforce each other's positive effects on potential investors and social acceptance. Next to implementing traditional policy instruments for financial support, Spanish authorities also engaged in direct capital investments in wind power, in the form of public-private partnerships, to reduce the risk perceptions of investors. Besides, regional authorities developed long-term strategies for wind power deployment to accommodate investors' plans. The convergence of these three strategies has led to a high investment interest and resulted in an exponential annual increase in the installed capacity of wind power.

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**Wind turbines: Clean, renewable and quiet?** Raman, Ganesh. *Noise & Vibration Worldwide*; Nov 2009, Vol. 40 (10), p.15-21

Noise levels from wind turbine have become a factor in deciding whether the installation should be approved in the U.S. Despite the fact that the wind is clean and renewable, wind turbine noise may impede extensive use of wind energy. Wind turbine installations and wind farms must comply the Federal Environmental Protection Agency and Occupational Health and Safety guidelines.

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**Renewable hot dry rock geothermal energy source and its potential in Pakistan.** N. A. Zaigham; Z. A. Nayyar. *Renewable and Sustainable Energy Reviews*; Vol. 14 (3), Apr 2010, p.1124-1129

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Rock**)

**Thermodynamic evaluation of geothermal power generation systems in Turkey.** Etemoglu, A. B. *Energy Sources Part A: Recovery, Utilization & Environmental Effects*; Jun 2008, Vol. 30 (10), p.905-916

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Turkey**)

**The Romanian perspective on geothermal energy resources. The chemistry of the geothermal waters from Oradea Triassic aquifer.** Petrescu-Mag, R. M. et al. *Aquaculture, Aquarium, Conservation & Legislation - International Journal of the Bioflux Society (AACL Bioflux)*; 2009, Vol. 2 (1), p.9-17

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**A design tool for hybrid geothermal heat pump systems in cooling-dominated buildings.** Chiasson, A. D.; Yavuzturk, C. *ASHRAE Transactions*; 2009, Vol. 115 (2), p.74-87  
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**Perspectives of woody biomass for energy: Survey of state foresters, state energy biomass contacts, and National Council of Forestry Association executives.** Francisco Aguilar; H. E. 'Gene' Garrett. *Journal of Forestry*; Sep 2009. Vol. 107 (6); p.297, 10 pages  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Bioenergy**)

**Stability of biodiesel and its blends: A review.** S. Jain; M. P. Sharma. *Renewable and Sustainable Energy Reviews*; Vol. 14 (2), Feb 2010, p.667-678  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Biodiesel**)



**Sustainable production of second-generation biofuels: Potential and perspectives in major economies and developing countries** – This 2010 IEA paper is [online](#).

**Hydropower's future, the environment, and global electricity systems.** R. Sternberg. *Renewable and Sustainable Energy Reviews*; Vol. 14 (2), Feb 2010, p.713-723

Hydropower is a well established electricity system on the global scene. Global electricity needs by far exceed the amount of electricity that hydrosystems can provide to meet global electricity needs. Much of the world's hydropower remains to be brought into production. Improved technology, better calibrated environmental parameters for large projects have become the norm in the past 15 years. How and why does hydropower retain a prominent role in electricity production? How and why does hydropower find social acceptance in diverse social systems? How does hydropower project planning address issues beyond electricity generation? How does the systems approach to hydropower installations further analysis of comparative energy sources powering electricity systems? Attention to the environmental impact of hydropower facilities forms an integral part of systems analysis. Similarly, the technical, political and economic variables call for balanced analysis to identify the viability status of hydro projects. Economic competition among energy systems requires in context assessments as these shape decision making in planning of hydropower systems. Moreover, technological change has to be given a time frame during which the sector advances in productivity and share in expanding electricity generation. The low production costs per kWh assure hydropower at this juncture, 2009, a very viable future.

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**Integration of RS-GIS techniques for catchment area treatment planning: Case study of Lakhwar Hydroelectric Project, Uttarakhand, India.** Lodhi, M. S.; Agrawal, D. K. *International Journal of Applied Environmental Sciences*; 2009, Vol. 4 (4), p.421-436  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-GIS**)

**Recent advances in water-lubricated bearings.** Godec, E. et al. *International Journal on Hydropower & Dams*; Vol. 16 (6) 2009, p.89-93  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Bearings**)

**Combined heating refrigeration and power system in food industry.** Sugiarta, Nyoman et al. *Journal of the Energy Institute*; Dec 008, Vol. 81 (4), p.185-190  
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**Performance-based building: Lessons from implementation in New Zealand.** Duncan, John. *Building Research & Information*; Mar/Apr 2005, Vol. 33 (2), p.120-127  
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**Methodology to measure and verify the impacts obtained from energy efficiency activities.** W. L. den Heijer; L. J. Grobler. *Energy Engineering*; 2010 Vol. 107 (2), p.41-51  
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**Evaluation of the energy saving technology development project in Korea.** Bae, W.; Cho, Y. *Energy Sources Part B: Economics, Planning & Policy*; Jan 2008, Vol. 3 (1), p.67-75  
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**Reduction of environmental pollution through optimization of energy use in cement industries.** Karbassi, A. R. et al. *International Journal of Environmental Science & Technology (IJEST)*; Winter 2010, Vol. 7 (1), p.127-134  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Cement**)

**Wastewater treatment: Energy-conservation opportunities.** A. Ataei. *Chemical Engineering*; Jan 2010. Vol. 117 (1), p.34-41  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Conservation**)

**Does electricity (and heat) network regulation have anything to learn from fixed line telecoms regulation?** Michael Pollitt. *Energy Policy*; Vol. 38 (3), Mar 2010, p.1360-1371  
The purpose of this paper is to examine the lessons from the recent history of telecoms deregulation for electricity (and by implication heat) network regulation. We do this in the context of Ofgem's RPI-X@20 Review of energy regulation in the UK, which considers whether RPI-X-based price regulation is fit for purpose after over 20 years of operation in energy networks. We examine the deregulation of fixed line telecoms in the UK and the lessons which it seems to suggest. We then apply the lessons to electricity networks in the context of a possible increase in distributed generation directly connected to local distribution networks. We conclude that there is the possibility of more parallels over time and suggest several implications of this for the regulation of electricity and heat networks.  
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**Is there a case for broadband utility communications networks? Valuing and pricing incremental communications capacity on electric utility smart grid networks.** James Heidell; Harold Ware. *The Electricity Journal*; Vol. 23, (1) Jan-Feb 2010, p.21-33  
(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Broadband**)

**Long-term contract auctions and market power in regulated power industries.** M. Soledad Arellano, Pablo Serra. *Energy Policy*; Vol. 38 (4), Apr 2010, p.1759-1763

Long-term contract auctions and market power in regulated power industries

A number of countries with oligopolistic power industries have used marginal cost pricing to set the price of energy for small customers. This course of action, however, does not necessarily ensure an efficient outcome when competition is imperfect. The purpose of this paper is to study how the auction of long-term contracts could reduce market power. We do so in a two-firm, two-technology, linear-cost, static model where demand is summarized by a price inelastic load curve. In this context we show that the larger the proportion of total demand auctioned in advance, the lower are both the contract and the average spot price of energy.

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**Towards a complete real-time electricity market design.** O'Neill, R. P. et al.

*Journal of Regulatory Economics*; Dec 2008, Vol. 34 (3), p.220-250

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**Modeling optimal economic dispatch and system effects in natural gas networks.** Midthun, K. T. et al. *Energy Journal*; 2009, Vol. 30 (4), p.155-180

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**Cointegration between gas and power spot prices.** C. de Jong; S. Schneider. *The Journal of Energy Markets*; Fall 2009 Vol. 2 (3), p.27 (20 p.)

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**Changes of deformational and reservoir properties of arenaceous-argillaceous rocks due to operation of underground gas storage facilities.** Golodkovskaya, G. A. et al.

*Moscow University Geology Bulletin*; Vol. 63 (3), Jun 2008, p.162-170

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**Failure analysis of transmission line tower: A case study.** Patil, Hemant et al.

*IUP Journal of Structural Engineering*; Jan 2010, Vol. 3 (1), p.20-27

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**Microstructural quantification, modelling and array ultrasonics to improve the inspection of austenitic welds.** Nageswaran, C. et al. *Insight: Non-Destructive Testing & Condition Monitoring*; Dec 2009, Vol. 51 (12), p.660-666

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Welds**)

**Kiwi ingenuity and creativity come to the fore to light up efficiently** - This 2009 *Electrical Technology* article on New Zealand power-saving lighting products is [online](#).

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## Reports (electronic)

### **ABB Ltd. SWOT Analysis;** Dec 2009, 10p.

Company profile of ABB (a leading supplier of power and automation technologies) by Datamonitor. Includes a strengths, weaknesses, opportunities and threats (SWOT) analysis. (To request this report email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Report1**)

### **Semiconductors Industry Profile: Global;** Dec 2009, 34p.

Datamonitor profile. Contents include: Market overview; Market value; Market segmentation; Competitive landscape; Leading companies in the industry; Market forecasts; Demographics. (To request this report: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Report2**)

## Special Topic: Substations

### **On seismic response of substation equipment and application of base isolation to transformers.** Saadeghvaziri, M.A. et al. *IEEE Transactions on Power Delivery*; Jan 2010, Vol. 25 (1), p.177-186

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### **The dead band control of LTC transformer at distribution substation.** Choi, J.-H., Moon, S.-I. *IEEE Transactions on Power Systems*; Feb 2009 Vol. 24 (1), p.319-326

In this paper, dead band control algorithms using a performance index of the load tap changing (LTC) tap position are proposed to reduce the tap changing operation times. The performance index is defined as the customer voltage quality with the tap position of LTC transformer. In addition, dead band control algorithms using the load diversity values of the feeders are proposed. The mathematical formulations of the proposed dead band control algorithms are introduced. A sample case study is shown to verify the effectiveness of the proposed dead band control algorithms. © 2009 IEEE. Reprinted with permission of the IEEE

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### **Design of grounding systems in substations using a mixed-integer linear programming formulation.** H. M. Khodr et al. *Electric Power Systems Research*; Vol. 79 (1), Jan 2009, p.126-133

(To request: email [library@energylibrary.org.nz](mailto:library@energylibrary.org.nz) Ref: **0210-Topic3**)

### **An ultrasonic on-line test method for detecting remotely and automatically energised porcelain post insulators in high-voltage substations.** Yang, E. et al. *Insight: Non-Destructive Testing and Condition Monitoring*; 50 (4) 2008, p.209-215

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### **A new optimization model for distribution substation siting, sizing, and timing.** T. H. M. El-Fouly et al. *International Journal of Electrical Power & Energy Systems*; Vol. 30 (5), June 2008, p.308-315

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### **IPENZ Engineering Update 2009:** [Bridges](#) [Drinking water](#) [Energy from wastes: Gasification of municipal solid wastes](#) [Infrastructure condition monitoring](#) [Infrastructure development/investment](#) [Life cycle costing](#) [Peter Drucker: Samplings of his writing](#) [River management](#) [Solar energy](#) [Wind energy](#)

### **Energy Update 2008:** [Advanced metering](#) [Electric Vehicles](#) [Energy conservation / energy behaviour](#) [Energy safety](#) [Hydrogen](#) [IEA publications](#) [Marketing green energy](#) [New Zealand's electricity sector reform](#) [Oldies and goodies \(management books and geothermal resources\)](#)

### **IPENZ Engineering Update 2008:** [Biofuels](#) [Disaster planning and management](#) [Electric vehicles](#) [Environmental Management Systems](#) [Peak oil](#) [Planning aspects of windfarms](#) [Rail transportation](#) [Risk management](#) [Water reuse / greywater](#) [Women in engineering](#)

## Featured Energy Events

**EECA Biofuels & Electric Vehicles Conference 2010** - Wellington 21 April. For more information visit the EECA [website](#).

**Liquid Biofuels in NZ: Emerging opportunities, sustainable development and increasing availability** (BANZ workshop) - Wellington 22 April. For more information visit the BANZ [website](#).

Please [email us](#) if you would like your event to be featured in the Energy Update.



## Energy on the Web

### New Zealand

**'Smarter' meters in New Zealand: Is the NZ electricity industry's rollout as 'smart' as it needs to be?** - Jan 2010 [report](#) by a group of electricity distribution companies.

**An options analysis for the commercial and economic development of offshore methane hydrates as a future energy option for New Zealand** - 2009 CAENZ [report](#).

**Submission on Industrial Allocation Regulations under the ETS** – PCE [submission](#).

**Submission on Submission to the Finance and Expenditure Committee on the Electricity Industry Bill** – PCE [submission](#).

**Delivering the diesel: Liquid fuel deliveries in New Zealand 1990 – 2008** - Feb 2010 Ministry of Economic Development [report](#).

**Investigation of the performance of Environment Canterbury under the Resource Management Act & Local Government Act** - Feb 2010 Ministry for the Environment [report](#).

**Assessment of current costs of geothermal power generation in New Zealand (2007 basis)** - 2009 Sinclair Knight Merz [report](#) for the New Zealand Geothermal Association.

**Development of a liquid electricity hedge market in New Zealand** – Jan 2010 Cybele Capital Limited [report](#) for the Electricity Commission.

**Electricity hedge market issues: A qualitative and quantitative study** (Third hedge market survey report) - Dec 2009 UMR Research Ltd [report](#) for the Electricity Commission.

**Interconnection asset capacity and grid configuration** - Electricity Commission consultation [paper](#).

**Security, Web Services, and EIEP Data Exchange** - Electricity Commission discussion [paper](#).

**Distribution pricing principles and information disclosure guidelines** – Feb 2010 Electricity Commission final [paper](#).

**Working on your land - a quick guide to your rights, obligations and how we'll work with you** - Transpower information [guide](#).

**Electric Car Survey** – [website](#) that is part of a PhD project studying the effect of introducing EVs on New Zealand's carbon dioxide emissions and the consumption of petrol and diesel.

**New Zealand leads the way in high temperature superconductors** – Science Media Centre blog [post](#).

**To develop a bioenergy strategy for New Zealand** – Feb BANZ workshop [presentations](#).

**The grid in the 21st century** - Transpower CEO Patrick Strange's [presentation](#) at the recent Power and Electricity World NZ Conference.

**The environmental bug** - *NZ Listener* [article](#) about a new way of turning waste into energy.

**Improved hydro storage helps boost Meridian Energy's half-year results** - 26 Feb *International Water Power & Dam Construction* [news](#).

**Brian Knolles: Smart meters only part of the solution** - Feb 17 *New Zealand Herald* [news](#).

## International

**Where has all the data gone? The crisis of missing energy efficiency data** - Feb 2010 American Council for an Energy-Efficient Economy (ACEEE) [report](#).

**The future of Britain's electricity networks** - Feb 2010 House of Commons [report](#).

**Department of Energy releases new estimates of nation's wind energy potential** - Feb 2010 NREL [news](#).

**AWEA 2009 year end market report** - American Wind Energy Association [report](#).

**Global installed wind power capacity 2008/2009 (MW)** - GWEC [stats](#).

**Research and development in geothermal exploration and drilling** - Dec 2009 Geothermal Energy Association [report](#).

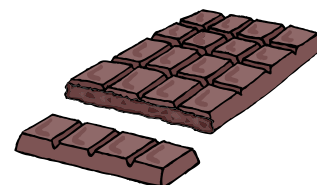
**A smart grid routemap** - Electricity Networks Strategy Group discussion [document](#).

**Electricity distribution price control review: Statutory licence drafting consultation** - Feb 2010 Ofgem open [letter](#).

**REN-21 Interactive Renewables Map** - REN-21 [website](#).

## Fuel for Thought (Energy chocolate competition)

To be in to win this month's prize of a block of Energy chocolate just [tell us](#) what year the first World Climate Conference was held. Draw closes 4pm Fri 19 March.



Congratulations to Ysabel, who won the January competition.

If you wish to be subscribed or unsubscribed to the Energy Update just let us know by [email](#) or phone.

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