

## IRENA AT HOME IN ABU DHABI



Dr. Sultan Al Jaber,  
Chair of the 3rd IRENA  
Preparatory Commission  
Session with H el ne Pelosse,  
Director-General of IRENA at  
a joint press conference.  
(Photo by World-Gen)

BY DICK FLANAGAN

The press conference was held on January 17th, 2010 at the Emirates Palace in Abu Dhabi during the WFES Convention. In prepared remarks, Ms. Pelosse said 500 delegates from 120 member states attended IRENA's third session held earlier that day to decide on the agency's work program and 2010 budget.

IRENA aims to become the leading international center of excellence for renewable energy, a platform for exchange and development of renewable energy knowledge, and will become the global voice for renewable energy. IRENA will facilitate access to all relevant renewable energy information and will share experiences on best practices and lessons learned regarding policy frameworks, capacity building pro-

jects, available finance mechanisms and renewable energy related energy efficiency measures.

It was disclosed at the press conference that IRENA's funding by member states is made voluntarily. The UAE will contribute \$136 million over the first six years and will cover all operational costs of IRENA's headquarters in Masdar City.

Ms. Pelosse announced four new signatories bringing the total to one hundred and forty three, almost three-quarters of the United Nations membership. The membership is comprised of 48 from Africa, 39 from Europe plus the EU, 33 from Asia, 14 from the Americas, and 9 from Australia. Saudi Arabia's recent decision to join IRENA was also made known and a signing date will be set.

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## IMPACT OF CLIMATE CHANGE



BY THOMAS P. CONAGHAN

Climate change is a topic of intense public discussion among scientists, government leaders, legislators, regulators, businesses, investors, analysts and the public at large. In recent years, institutional investors and social activists have called for the SEC to require public companies to address the impact of climate change on their businesses in their securities filings. While a few companies have provided a limited amount of climate change disclosure in the past, the practice has not been widely adopted outside of the energy industry and the level of disclosure has been largely limited to compliance with environmental regulation.

Electric utilities, as one of the most heavily regulated economic sectors in America, are accustomed to reporting the potential impact of regulatory decisions on their investment and operations strategies.

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# Westinghouse AP1000

## On schedule for 2013

*Placement of the containment vessel  
bottom head at Sanmen, Unit 1.*



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The Westinghouse AP1000™ nuclear power plant is the technology of choice for active and emerging new plant markets across the globe.

In China, four new AP1000s™ are currently under construction and they are being built in an on-time and on-budget manner, with the first scheduled to come online as planned in 2013.

In the United States, the AP1000™ has been selected as the technology of choice for more than half of the new plants announced, including the only six for which engineering, procurement and construction contracts have been signed.

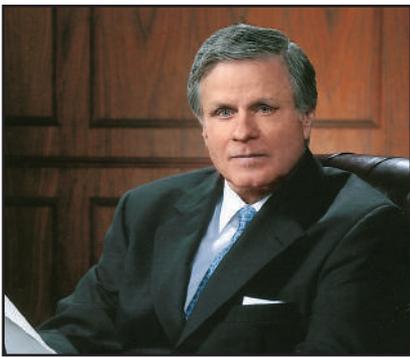
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*Industry News, both domestic and international, with newsmakers compose the first half of World-Gens' issues. Seventy-five plus items fill the pages with topical industry events for utilities- developers and about technological advances. For example, on page 5 in this issue, IBM reports on solar cells and is looking for a manufacturing partner!*

*On page 1, International Renewable Energy Agency (IRENA) has doubled its membership to 143 signatories in just one year. IRENA will act as a clearinghouse and become a one-stop shop for up to date and relevant information on renewable energy worldwide. Its administrative functions were outsourced to UNOPS in March and plans are in the works to move into Masdar City in 2011. World-Gen was invited by Masdar to Abu Dhabi the week of January 15th.*

*Climate change is at the center of the American Clean Energy and Security Act, passed by the House and pending before the Senate. The Act contains GHG reduction provisions and mechanisms. Government mandates for meeting GHG reduction targets will require additional capital investment and the assumption of regulatory risk. The question Tom Conaghan asks on page 1: How much of this risk must utilities assess and report to investors through public securities filings?*

*Lyn Corum writes from California on page 13 that the 20% from renewables by 2010 will not be met until 2012 to 2014 time frame. Meanwhile, the Governor has issued an executive order requiring 33% from renewables by 2020. Corum points out that the Imperial Valley in the southeastern corner of California has over 40,000 mws of untapped resources: 29,000 solar mws, 11,000 mws of wind, 2,500 mws of geothermal and 94 mws of biomass. These numbers were published by the California Energy Commission.*

*Torys' 2010 M&A trends sees the combination of strategic demand for renewable energy assets and the financing requirements for developing new projects pointing to an active period in renewable energy M&A in 2010 and beyond. Torys' sees Canadians seeking growth opportunities outside of Canada because of the strong Canadian dollar relative to the US dollar. The economic crisis will continue to feed the spinoff market as distressed companies sell non-core assets. The private equity buyout market continues to face headwinds. There's more 2010 trends on page 14.*

*The smart grid is essentially an energy internet delivering real time information, Bob Gilligan said in his keynote address at the "Future of Cities" event in the UK in February. The smart grid is not a future vision. GE's technology is being used at utilities in Florida, Hawaii and Ohio driven by stimulus dollars, he points out on page 15.*

*Joe Stanislaw said it is becoming clear that the global obsession with anything green has subsided. Natural gas and coal are crucial fuels needed to transition to a carbon-neutral world. The world's infrastructure is built for fossil fuels. Natural gas provides 22 percent of America's electricity and the US has a 100 year supply. The gas industry has reduced emissions by 26 percent since 1980, he said on page 16. Stanislaw is a member of the Class of 2009.*

*On January 28, 2010, the Chinese central government officially announced the formation of the National Energy Commission (NEC). The NEC will be headed by Premier Wen Jiabao and will consist of 22 high-level government officials, including Vice Premier Li Keqiang who will serve as deputy head, as well as the top leaders of the National Development and Reform Commission (NDRC) and the ministries of finance, environmental protection, land and resources, and foreign affairs. The seniority of NEC members is a clear indication of the central government's commitment to overcoming the bureaucratic infighting that has made it exceedingly difficult to secure cooperation between the relevant players, including government agencies and large state-owned energy companies, on energy initiatives considered vital to sustaining China's economic growth. John Z. L. Huang, founding partner of MWE China, discusses the reasons for the formation of the commission, what it might do to spur the country's own domestic energy projects and what effect this might have on China's rate of energy imports on page 17.*

*Equator Principles were developed to manage social and environmental issues in project financing. Financial institutions that have adopted the Principles are required to report annually and as of June 2008, 43 reports have been filed. William Stark outlines the requirements to evaluate projects and classifies each in one of three categories on page 18.*

*In spite of the growing chatter about the coming "de-globalization," Steve DeAngelis, Class of 2008, sees scant evidence that the decades-long push to integrate trade is coming to an end.*

(continued on page 12)

## EMCOR AWARDED

NORWALK, CT - EMCOR Energy Services, Inc. was awarded a nationwide Blanket Purchase Agreement (BPA) to provide comprehensive energy services for the General Services Administration.

EMCOR Energy may now be contracted under a BPA, which provides a simplified means for federal agencies to acquire comprehensive professional energy services.

There are eleven GSA regions.

## SIEMENS INVESTS IN US

CHARLOTTE, NC - Siemens will build a new 60-Hz gas turbine production plant at its existing facility in Charlotte. The initial investment will be approximately \$135 million. Production is slated to start in the fall of 2011.

Over the next five years, employment at the Charlotte site will grow to nearly 1,800 people.

Siemens has also added 1,000 wind jobs in the US.

## GENON INKED

ATLANTA, GA - Mirant and RRI Energy have entered into an agreement creating GenOn Energy, with approximately 24,700 megawatts of electric generating capacity and a pro forma market capitalization of \$3.1 billion.

Edward R. Muller, chairman and chief executive officer of Mirant, will be chairman and chief executive officer of the combined company. Muller is a member of the Class of 2000.

## HPSA CONTRACTED

BASKING RIDGE, NJ - Hitachi Power Systems America has been awarded a blanket contract to supply Selective Catalytic Reduction (SCR) DeNOx catalyst for American Electric Power's SCR Fleet. Hitachi will design, engineer, and supply catalyst for up to eight of AEP's coal-fired electric generating stations for deliveries starting in 2012 through 2014.

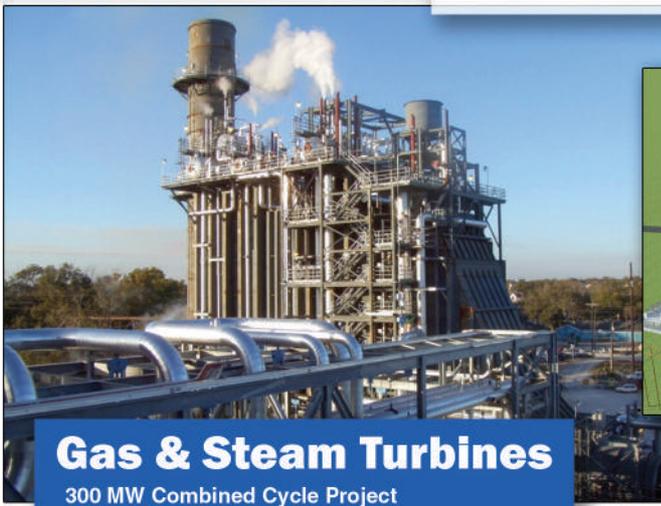
Henry Bartoli, president and CEO of Hitachi Power Systems America stated, "This contract represents another important milestone in the deployment of Hitachi's state-of-the-art catalyst to the U.S. market and supports our efforts to be an industry leader in the reduction of emissions from power generation facilities." Bartoli is a member of World-Gen's Class of 2007.

## Innovative Power Design Solutions

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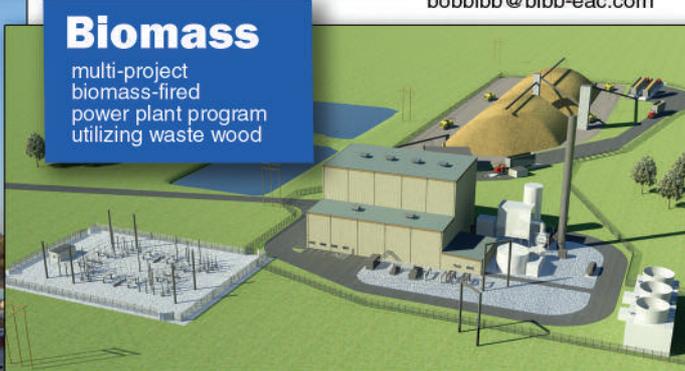


Bob Bibb, Chairman  
bobbibb@bibb-eac.com



### Gas & Steam Turbines

300 MW Combined Cycle Project

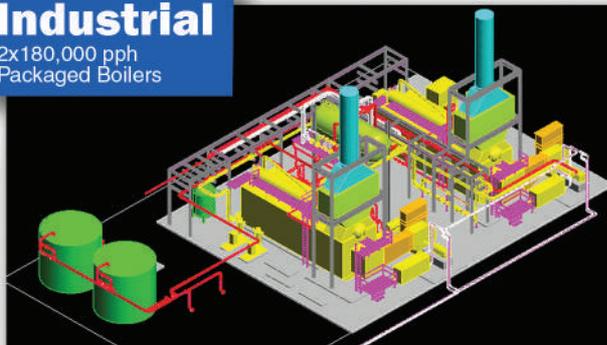


### Biomass

multi-project biomass-fired power plant program utilizing waste wood

### Industrial

2x180,000 pph Packaged Boilers



### Solar

eSolar 49 MW Standard Plant building block using CSP "power tower" to generate steam for a traditional steam turbine. (Demonstration plant pictured)



### Environmental

240 MW SCR System Backfit



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#### CLIENTELE:

Utilities IPPs Industry Universities OEMs Banks/Investors

#### PROJECTS:

Biomass Solar (Thermal & PV) Wind Simple & Combined Cycle Fluidized Bed/PC/Stoker Boilers Biofuels Landfill Gas MSW Gasification Pyrolysis Plant Improvements Air Pollution Control Engine-Generators CHP/Cogeneration Energy Savings Facilities/Buildings & Systems



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## B&W EXPANDS

LYNCHBURG, VA - The Babcock & Wilcox Company has signed a multi-year lease with the City of Lynchburg for a 50,000-square foot facility to house its growing engineering and design team working on the new B&W mPower nuclear reactor.

B&W announced its plans to design and deploy a new modular nuclear reactor capable of generating power in 125 megawatt increments. B&W has begun its pre-licensing activities with the Nuclear Regulatory Commission, and the company intends to submit the license application in early 2012.

## GE DEVELOPS SUN IQ

SCHENECTADY, NY - GE has developed a 600 kW solar inverter. The intermittent load that the solar power plant will provide can present a challenge for the utility grid, causing the plant to trip off-line. In order to ensure that solar power plants stay online, SunIQ\*, GE's suite of solar plant monitoring and controls, can manage voltage.

Engineering and design were completed at GE's controls center of excellence in Salem, VA. The company already makes 4,000 wind converters annually and has increased production at the Salem facility to include solar.

## EIF FUNDS

NEEDHAM, MA - Energy Investors Funds and NTE Energy created a joint venture to develop, construct and operate large-scale hybrid renewable energy facilities throughout the United States. Hybrid renewable energy projects combine different types of renewable and traditional energy technologies. EIF NTE plan new projects in Florida, South Carolina, and Alabama.

## J-POWER ACQUIRES

CHICAGO, IL - J-POWER USA Generation and the John Hancock Life Insurance Company acquired two power plants - PPL Shoreham Energy, LLC located in Brookhaven, NY and PPL Edgewood Energy, LLC, in Brentwood, NY. Both assets are fully contracted to the Long Island Power Authority ("LIPA").

"The acquisition of Shoreham and Edgewood is consistent with our strategy of investing in and developing well-structured and high quality contracted power generating facilities," stated John Salyer, president and CEO of J-POWER USA.

## IBM'S SOLAR CELL

ARMONK, NY - IBM built a solar cell made entirely of readily-available elements - copper, tin, zinc, sulfur, and/or selenium. The cell's power conversion demonstrates an efficiency of 9.6 percent - 40 percent higher than the value previously attained.

"In a given hour, more energy from sunlight strikes the earth than the entire planet consumes in a year, but solar cells currently contribute less than 0.1 percent of electricity supply - primarily as a result of cost," said Dr. David Mitzi, who leads the team at IBM Research that developed the solar cell.

IBM does not plan to manufacture solar technologies, but is open to partnering with solar cell manufacturers to demonstrate the technology.

## WESTINGHOUSE PROCEEDS

PITTSBURGH, PA - Westinghouse Electric Company has been notified by CEZ that it has successfully complied with the qualification requirements stipulated in the Qualification Documentation for the public contract "Completion of the Temelin Nuclear Power Plant."

Kerry Hanahan, Director of Project Development in the Czech Republic said: "With a nearly 20-year history at Temelin, Westinghouse welcomes the opportunity to continue providing real solutions for the sustainability of the Czech nuclear program. We believe that the AP1000 plant represents the natural basis of safe, secure, reliable, and economically beneficial energy production in the Czech Republic, now and into the future."

The AP1000 design is certified by the U.S. Nuclear Regulatory Commission, the only Generation III+ reactor to receive such certification. The European Utility Requirements (EUR) organization certified that the AP1000 plant is compliant with European Utility Requirements, confirming that it can be successfully deployed in Europe.

## CHROMALLOY SELECTED N SOLAR IN US

TAMPA, FL - Chromalloy has been selected by Signal Hill Wichita Falls Power to provide repairs and overhaul on the LM2500 industrial gas turbine engine. The contract covers the installation of Chromalloy's Single Crystal Platinum Aluminide and Air Plasma Spray coated High Pressure Turbine blades, nozzles and shrouds. The contract is the first overhaul at Chromalloy's depot in San Diego.

SACRAMENTO, CA - N Solar Inc.'s move to Sacramento marks the growing trend of Korea's emergence as a major solar investor. It is estimated that South Korean manufacturing companies will invest \$3.2 billion in cleantech industries in 2010 and that the country could have one gigawatt of solar capacity by 2012. Operations will begin in September 2010 and create 150 new "green" jobs.

## AREVA ACQUIRES P.S.D.

CANTON, OH - AREVA's Transmission and Distribution division acquired P.S.D. a thirty-year old EPC company located in Canton. The acquisition of PSD will strengthen AREVA T&D's presence in the USA market primarily for the integration of power electronics solutions for Air-insulated Substations (AIS), Gas-insulated Substations (GIS) and wind farm grid connection solutions.



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## NEXTERA INVESTS

SCHENECTADY, NY - NextEra Energy Resources has selected GE's WindBOOST\* technology to enhance the output from its fleet of approximately 800 GE 1.5sle wind turbines.

GE's WindBOOST control software makes it possible for GE 1.5sle wind turbines to increase output by up to 100 kilowatts, enhancing productivity from 1.5 to 1.6 megawatts.

This expanded mode operation is expected to produce up to 4% more annual energy output per wind turbine.

## PPA TO RES

BROOMFIELD, CO -Renewable Energy Systems Americas executed a 20 year power purchase agreement (PPA) with Public Service Company of Colorado. PSCo's agreement to purchase 252.2 megawatts of clean power from Cedar Point Wind is part of the 2009 All Source Solicitation for energy generators.

Construction of Cedar Point Wind is expected to begin in mid 2010 with commercial operation expected in 2011. A 42 mile transmission line will also be constructed.

## IHS ACQUIRES

ENGLEWOOD, CO - IHS Inc. acquired Emerging Energy Research, a leading advisory firm whose mission is to help clients understand, leverage and exploit the technological, regulatory and competitive trends in the global emerging energy sector. The purchase price is approximately \$18 million.

"Customers rely on Emerging Energy Research to provide informed, objective views on market segments across the alternative energy industry," said Emerging Energy Research President and Founder William Ambrose.

## TOSHIBA LAUNCHES

HOUSTON, TX - Toshiba established a sales and technical support for its new product, the Super Charge Ion Battery, SCiB™, a nano-based breakthrough lithium technology noted for its rapid charging capability of 90% charge in less than 5 minutes and long life of more than 10 years even at rapid charge rates.

SCiB™ cells comprising the battery packs will be supplied in the Saku Factory located in Nagano, Japan. Initial market development activities in the US will focus on automotive HEV/PHEV/EV, smart grid/grid storage, and wind and solar power.

Toshiba currently has two battery pack offerings commercially available.

## DUPONT INNOVATES

WILMINGTON, DE - The Massachusetts Institute of Technology's *Technology Review* magazine has named DuPont to the 2010 TR50, the inaugural list of the 50 most innovative companies in the world. DuPont was selected for its advances in developing butanol as a new type of bio-fuel.

DuPont and partner BP formed a joint venture last year, Butamax™ Advanced Biofuels, to bring biobutanol to market. "Biobutanol is an ideal molecule for fueling cars," said Craig F. Binetti, president of DuPont Applied BioSciences.

Ground has been broken on a biobutanol technology demonstration facility on the BP Saltend site in Hull, U.K. It will be operational this year.

Technology Review, Inc., an independent media company owned by MIT, is the authority on the future of technology, identifying emerging technologies and analyzing their impact for leaders. Technology Review's media properties include *Technology Review* magazine, the oldest technology magazine in the world (founded in 1899); the daily news website TechnologyReview.com; and events such as the annual EmTech@MIT Conference.

## CATERPILLAR PEAKS

PEORIA, IL - Caterpillar announced the availability of the G3512E advanced natural-gas-fueled generator set, designed for maximum efficiency in extended-duty distributed generation and combined heat and power applications.

"Today, more people realize that distributed generation with combined heat and power is a multi-benefit solution to meet their increasing electric power demand," said Tom Lee, Caterpillar Electric Power Gas Engineering Manager. "The G3512E is ideal for base load as well as peak shaving or peak shaving."

**Coal blending for Illinois Basin and PRB coal**

**Coal handling and storage facility**

**Coal, limestone and ash handling**

**Pet coke handling facility**

**Stacker/Reclaimer**

**Coal preparation and material handling**

**Gypsum conveying and barge load out facility**

**Barge unloading, conveying, stack out and reclaim facility**

**Coal and woodchip handling**

**Limestone/gypsum handling and gypsum barge load out system**

**Coal handling for fuel switch to PRB coal**

**Rapid car unloading, fuel blending (Eastern or PRB coal)**

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## GE, JUICE CO-DEVELOP

COLUMBUS, OH - GE and Juice Technologies announced a joint development agreement to create intelligent plug-in electric vehicle (PEV) charging devices for U.S. and global markets. The chargers integrate GE's smart meters with Juice Technology's Plug Smart™ engine to help consumers charge their cars during low-demand, lower cost time periods.

"We've collaborated with utilities and with Ohio State University's Center for Automotive Research to develop the right solution for both utilities and consumers. Our collaboration with GE gives us the expertise we need to bring our solutions to market," said Rich Housh, CEO of Juice Technologies.

"These chargers will help consumers use electric cars as cost-effectively as possible, speeding their adoption," said Bob Gilligan, vice president of Transmission and Distribution for GE Energy Services.

## EMERSON INKED

MARSHALLTOWN, IA - Emerson Process Management has been awarded approximately \$2 million in contracts to provide its Fisher® control valves for Westinghouse Electric Company's newest generation of nuclear power plants. The contracts cover Westinghouse AP1000™ nuclear plants to be built in both China and the United States, and agreements are in place to cover an additional \$3 million for more plants expected to be built in the United States.

The first use of the valves will be in new AP1000 nuclear plants under construction in China. The Sanmen Nuclear Power Plant, located in Zhejiang Province, will have two reactors in its first stage of development. Construction began in February 2008 with initial operation expected in 2013. The Haiyang Nuclear Power Plant, located in Shandong Province, also has two reactors under construction. Construction began in July 2008 with operation scheduled for 2014. This site is designed for as many as six reactors.

## SENSUS PARTNERS

RALEIGH, NC - Sensus and ABB announced a new partnership agreement that will allow the two companies to better collaborate on delivering enhanced Smart Grid solutions. These Smart Grid solutions are built upon proven integrations already delivered together by Sensus and ABB; Sensus has already integrated ABB distribution automation devices over a network into ABB Network Manager SCADA and DMS systems.

"Sensus and ABB offer complementary smart grid solutions to electric utilities, enabling customers to benefit from integrated solutions from two powerhouse technology providers," said Peter Mainz, Sensus president and CEO.

## ALBERICI CONSTRUCTS

ST. LOUIS, MO - Alberici Constructors, Inc. has completed a \$230 million project to reduce emissions from the coal-fired power plant owned by Ameren Energy Resources Company.

The project at Coffeen Station is part of a \$1 billion environmental improvement program conducted at Ameren's coal-fired power plants in Illinois.

## DOE GUARANTEES

LOS ANGELES, CA - The Department of Energy signed a conditional commitment to offer a \$117 million loan guarantee for Kahuku Wind Power to support the development, design, construction and operation of the company's 30-MW wind generation project on the island of Oahu, Hawaii. Milbank, Tweed, Hadley & McCloy is representing the DOE.

## AREVA ACQUIRES

MOUNTAIN VIEW, CA - AREVA acquired Ausra, a provider of large-scale concentrated solar power solutions for electricity generation and industrial steam production.

The market for concentrated solar power plants is expected to grow substantially in the next decade with an average annual growth rate of 20% and should reach an estimated installed capacity of over 20 GW by 2020.

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## SEAROC JOINS

VANCOUVER, BC - SeaRoc is joining Natural Power to form the first renewable energy consultancy capable of providing end-to-end services globally for the industry both onshore and offshore. Natural Power has over 1300 MW of client projects offshore.

Natural Power and SeaRoc will form a group of over 220 highly-skilled resource engineers, development specialists, construction engineers, GIS experts, and asset managers based across 11 offices worldwide.

## POWER ENGINEERS EXPANDS

HAILEY, ID - POWER Engineers recently acquired the 21-person power plant design group, PEC Engineers, a South African consulting firm. The new subsidiary company is housed in new quarters in Centurion, near Johannesburg. PEC Engineers will advance into renewable project work in Africa and Asia Minor to support POWER's busy geothermal and other renewables work in Kenya and Turkey.

## PATTERN ACQUIRES

SAN FRANCISCO, CA - Pattern Energy Group has acquired the 283 megawatt Gulf Wind project from Babcock & Brown, including 118 wind turbines.

Gulf Wind is located in Kenedy County, TX.

Pattern executed financing agreements with leading wind project lenders to secure debt to fund a portion of the purchase price.

The acquisition concludes a nearly one year, competitive sale process. The lenders included five institutions.

## GE CONTRACTED

KANSAS CITY, MO - GE received a contract to provide continuous emissions monitoring systems and data acquisition and handling systems for Conectiv Mid-Merit, LLC's power generating facility in Delta, PA.

Services provided to Conectiv's Delta combined-cycle plant project will include: system engineering, equipment fabrication, installation supervision and startup for three CEMS systems; monitoring of NOx, CO, NH3 and O2; collection and archiving of data for environmental reporting; preparation of Conectiv's reports required under federal and state emission regulations, and assembly of accessories building and installation of power distribution and cable management systems for DCS and UPS equipment

## LONGVIEW SELECTS

MAIDSVILLE, WV - Longview Power has selected Siemens Energy to conduct an innovative study analyzing the applicability of post-combustion carbon dioxide capture technology.

The Longview Power project includes a new 695-MW rated advanced supercritical pulverized coal power plant equipped with Siemens' advanced air pollution control equipment.

The study will include process design activities focused on the potential application of Siemens' second generation amino acid salt post-combustion CO2 capture process. Longview Power is majority-owned by GenPower Holdings, L.P.

"GenPower is excited to participate in the advancement of technologies that further our commitment to the development of clean energy resources," stated Bob Place, CEO of GenPower Holdings, L.P.

"With the results of the study and the support of government funding, we hope to expand upon this agreement and eventually design and install a post-combustion plant demonstration unit," stated Randy Zwrin, CEO of Siemens Energy's Service Division and a member of World-Gen's Class of 2000.

## AUAM LAUNCHED

TOKYO, PITTSBURGH - Toshiba and Westinghouse Electric formed a new joint venture, Advance Uranium Asset Management Ltd. (AUAM), to strengthen Toshiba Group's capabilities in the nuclear front end business segments and enhance the extensive range of support services extended to utilities around the world.

UK based AUAM will undertake uranium related transactions in the front end of the nuclear fuel cycle. The company is 60 percent owned by Toshiba and 40 percent by Westinghouse.

This joint venture will allow Toshiba to initiate uranium transactions for its investment interests in Kazakhstan uranium mines.

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## NREL FUNDS WIND

WASHINGTON, DC - A groundbreaking study has found that Nebraska and the other states in the Southwest Power Pool (SPP) region can reliably obtain 40% of their electricity from wind energy, achieving major carbon emissions reductions and incurring only minor costs associated with operating the power system differently than it operates today.

The wind integration study, funded by the National Renewable Energy Laboratory, examined how the power system would operate in scenarios in which 10%, 20%, and 40% of the electricity was supplied by wind energy in Nebraska and the SPP region, which includes all of Kansas and Oklahoma, most of Nebraska, and parts of New Mexico, Texas, Louisiana, Missouri, Mississippi and Arkansas. A 40% wind energy penetration is one of the highest levels studied in the U.S. or anywhere in the world.

## MISTRAS TAPS

PRINCETON JUNCTION, NJ - MISTRAS Group, Inc. has been performing research & development under an EPRI project that has involved fifteen participating member electric utilities.

Mistras' Transformer Asset Protection Solutions (TAPS) developed in cooperation with EPRI, detects and locates electrical, mechanical and thermal problems within transformers and switchgear. The information TAPS provides can be used to make informed and predictive decisions on routing and asset usage for these transformers and switchgear. TAPS can help closely match equipment performance to changes in industrial and consumer usage and therefore capital investments can be targeted precisely where required, minimizing investment and maximizing performance and reliability.

It is reported that the market for TAPS in the United States includes approximately 147,000 transformers.

## GE EXPANDS

SCHENECTADY, NY - GE plans to invest approximately €340 million to develop or expand its wind turbine manufacturing, engineering and service facilities in four European countries—the UK, Norway, Sweden and Germany.

GE's European expansion plans to develop GE's next generation wind turbine, a 4-megawatt machine designed specifically for offshore deployment.

The European Wind Energy Association expects that Europe's offshore wind sector will grow more than 70% in 2010.

## AREVA AWARDED

PARIS, FR - AREVA's Transmission and Distribution division in India has been awarded two contracts for Extra High Voltage turnkey projects at the Moga (Punjab) and Bhiwani (Haryana) plants by Power Grid Corporation of India Limited (PGCIL).

The two orders, with a combined value of approximately €40 million, are for the supply and installation of 765/400 kV Air-insulated Substations (AIS) for Northern Grid-II and Northern Grid-III. AREVA will also provide 765 kV circuit breakers and substation automation systems as part of the project. Both plants are scheduled for commissioning by 2012.

## WIND JOBS

WASHINGTON, DC - The U.S. Renewable Energy Group, A-Power Energy Generation Systems, and American Nevada Group announced the development and construction of a new production and assembly plant in Nevada that will supply highly advanced wind turbines to renewable energy projects throughout North and South America. The facility will have an annual production capacity of 1,100 megawatts of wind energy turbines. The facility is expected to employ approximately 1,000 Nevada workers and create even more jobs during the construction process.

## SIEMENS, BPL TEAM

ORLANDO, FL - Siemens Energy and BPL Global are expanding their relationship in North America to provide the most comprehensive Smart Grid portfolio in the industry. Siemens and BPLG will integrate BPLG Smart Grid solutions with Siemens' distribution automation applications, including its distribution management system (DMS), SCADA and substation automation solutions.

The solution provides electric utilities with direct control of dispatchable load with predictable and verifiable management of individual loads.







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# INTERNATIONAL NEWS

## AUSTRALIA

IBM has been selected by Australian energy provider Western Power as the systems integration and project management partner for its SmartGrid-Advanced Meter Infrastructure pilot program.

Western Power's SmartGrid pilot program is focused on providing a platform for a range of energy efficiency and demand management initiatives in Western Australia.

## BRAZIL

GE received commitments to supply wind turbines for 400 megawatts of power to the country's clean energy capacity, marking the debut of GE's wind turbine technology in Brazil. Both DESA and Renova have selected GE's 1.5 megawatt class wind turbines for use at the projects. All of the projects are expected to be in commercial operation by July of 2012.

## BRAZIL

Grupo Bertin awarded MAN Diesel a contract to supply the electro-mechanical equipment for six diesel power plants. The order is worth € 300 million.

MAN Diesel will supply GenSets, comprising large-bore diesel engines, complete with associated generators, along with other power plant components. The six diesel power plants will generate over 1000 MW of electricity.

## BULGARIA

GE was recently awarded a contract by Enel SpA to complete phase 6 of an 8-phase project at Enel Maritza East 3 thermal power plant. GE commenced work on the four units in 2003, in a phased approach.

## CANADA

Vestas has entered into an agreement with TransAlta to supply and service 18 additional units of the V90-3.0 MW wind turbine at the Kent Hills site near Moncton, New Brunswick. The order includes a five-year service and maintenance agreement with Vestas. The 18-turbine order is an expansion of the site that already includes 32 units of the V90-3.0 MW.

## CANADA

Starwood SSM1 Canada has completed agreements to finance and construct a 20 megawatt (MW) solar photovoltaic project in the City of Sault Ste. Marie, Ontario. The project will consist of two 10 MW solar photovoltaic power generation projects and is contracted under the Renewable Energy Standard Offer Program developed and overseen by the Ontario Power Authority. It will connect to local utility PUC Distribution, Inc.

## CHINA

Foster Wheeler subsidiary Global Power Group has been awarded a contract by Sinopec Jiujiang Company for the design and supply of two circulating fluidized-bed steam generators for the Sinopec Jiujiang Fuel Alteration Project located in Jiangxi province.

## FINLAND

AREVA's Transmission and Distribution division signed an agreement to acquire Vamp, the Finnish-based specialist in arc protection and protection relays.

## FINLAND

The world's first solid oxide fuel cell unit, running on landfill gas, has successfully concluded the first phase of its validation program. The power generating unit, which is developed and run by Wärtsilä, has been operating for more than 1500 hours producing electricity with extremely low emissions.

## FINLAND

Metso has signed an agreement with Kuopion Energia Oy to deliver power plant automation, turbine controller and electrostatic precipitator control to the new combined heat and power (CHP) plant in Haapaniemi. Start-up of the plant is scheduled for the end of 2011.

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## GERMANY

KEMA has won the open European tender on the "Front End Engineering Design Study" for two offshore wind farms in the North Sea. German utility EnBW Energie Baden-Württemberg AG issued the tender. The wind farms will have a maximum capacity of 1,200 MW and produce approximately 4.5 billion kilowatt-hours per year.

## GREECE

ABB has won an order worth \$26 million from Hellenic Petroleum SA to provide an integrated power and automation system for the upgrade of Hellenic Petroleum's Elefsina refinery. ABB will design, supply, install and commission the electrical and automation system to power the refinery.

## GREECE

Wärtsilä has been contracted to supply the equipment and engineering for a new 119 MW power plant being built on the island of Rhodes. The plant is scheduled to become fully operational during the second half of 2011.

## INDIA

AREVA's Transmission and Distribution (T&D) Division in India has been awarded a €18 million contract for the supply and installation of electrical Balance of Plant solutions for two 600 MW thermal power plants at Malwa in southwest Madhya Pradesh. AREVA T&D will manufacture and install a 400/220 kV Air-insulated Substation, as well as distribution and power transformers and low voltages switchboards.

## ISRAEL

Vogt Power International has been selected to supply Israel Electric Corporation one Heat Recovery Steam Generator (HRSG) for IEC's Tzafit Power Station located near Kfar Menahem.

IEC is the sole integrated electric utility in the State of Israel and generates, transmits and distributes substantially all the electricity used in Israel.

## ITALY

GE Hitachi Nuclear Energy signed an agreement with EnergyLab Foundation to support Italy's pursuit of nuclear energy. EnergyLab ("Fondazione EnergyLab"), a Milan-based non-profit organization, collaborates with Italy's leading energy companies, universities and local governments to help solve the country's energy and environmental challenges.

Italy's government in 2008 ended a ban on domestic nuclear energy production and announced plans to build eight to 10 new nuclear power stations.

## ITALY

Siemens Energy and the Norwegian utility Statkraft have signed an agreement to build solar plants with a total capacity of 40 megawatts. Siemens will perform the engineering, project management, and turnkey construction of the photovoltaic plants. Construction of the first solar plant is expected to begin in spring 2010.

## JAPAN

Wärtsilä and Hitachi Zosen have signed a business development agreement to develop and market fuel cell based power solutions for distributed power generation applications in Japan. The combined heat and power applications run on either city gas or bio gas and will feature the use of Wärtsilä's fuel cell technology.

## NETHERLANDS

Siemens Energy has handed over the Sloecentrale combined cycle power plant located in the Dutch town of Vlissingen-Oost to the joint venture of Delta Energy, Netherlands and EDF, France. The natural-gas-fired plant has a very high efficiency level of 59 percent, maximized flexibility and low nitrogen oxide emissions.

## QATAR

Qatar Foundation will have a majority shareholding in Qatar Solar Technologies, or QST, a joint venture with SolarWorld AG. QST will develop a new plant at Ras Laffan Industrial City.

The initial investment in Qatar Solar Technologies is valued at over \$500m and will provide employment for several hundred people in a wide range of fields.

## ROMANIA

GE and Nuclearelectrica, Romania's state-owned nuclear utility, have signed a services and maintenance agreement for the Cernavoda Nuclear Power Plant (NPP), valued at up to \$146 million. Cernavoda NPP supplies 20% of Romania's energy.

## RUSSIA

Ventyx® announced a new reseller agreement with Russian systems integrator SpetsTek, enabling the company to distribute the industry-leading plant operations management solution eSOMS in the Russian, Ukrainian and Kazakhstan markets.

## SPAIN

Foster Wheeler subsidiary Global Power Group has been awarded a contract to design and supply a Low NOx Burner System for the Spanish utility company ENDESA. The Low NOx Burner System will be integrated in the Compostilla Power Plant, Unit 3 (330 MWe) located in Ponferrada, León.

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## SAUL TO CEO

Jens-Peter Saul has been appointed CEO of the Siemens Wind Power Business Unit headquartered in Brande. Saul was Managing Director of Siemens Energy in the UK and responsible for North and West Europe.



Jens-Peter Saul

## HALLEN NAMED

Johan Hallén has been appointed vice president of Nordic Operations for Westinghouse Electric Company's Nuclear Services business, responsible for managing the company's nuclear service projects and operations in the Nordic Region.



Johan Hallén

## SAUER PROMOTED

WorleyParsons has appointed Harry W. Sauer as Senior Vice President of the Power Customer Sector Group for its US/Latin America Caribbean region, effective March 1.



Harry W. Sauer

## MCDONALD TO CHAIR

John D. McDonald, general manager of marketing for GE's transmission and distribution business has been selected to head the Commerce Department's National Institute of Standards and Technology's Smart Grid Interoperability Panel Governing Board.



John D. McDonald

## ARMIJO NAMED

Lockheed Martin named J. Frank Armijo as its Vice President, Energy and Environmental Services. Mr. Armijo served with DOE.

## ENERNOC APPOINTS

EnerNOC, Inc. appointed Dr. Susan F. Tierney to its Board of Directors. Currently, she serves on the Board of Directors of Evergreen Solar, and Ze-gen.

## SHAW JOINS CO2

CO2 Solution Inc. announced that Dr. Alan Shaw, Ph.D., President and Chief Executive Officer of Codexis, Inc., has joined its Board of Directors.

## PB NAMES NEW CEO

Parsons Brinckerhoff appointed George J. Pierson as the firm's Chief Executive Officer. Pierson succeeds Keith J. Hawksworth, who becomes Chairman.



George J. Pierson

## DEAN PROMOTED

Babcock Power Services Inc. announced that Edward Dean has been promoted to President and CEO, succeeding Theodore Maliszewski.

## EDSA APPOINTS

EDSA named Ken Wood to its newly-created position of Business Executive overseeing its Paladin SmartGrid operations.

## WELIKY APPOINTED

EverPower Wind Holdings, a Terra Firma company, announced that Charles Weliky was appointed as its non-executive chairman. Mr. Weliky retired from Con Edison.



Charles Weliky

## MCDERMOTT WILL & EMERY ADDS

McDermott Will & Emery LLP announced that Blake H. Winburne has joined the firm as a partner in the Energy & Commodities Advisory Practice Group in the Houston office. Joining Mr. Winburne at McDermott are partner Matt Archer and associates Brad Gathright and Kimberly Glasspool. All four were formerly in the Houston office of Baker Botts L.L.P.

## ANDERSON JOINS CH2M HILL

CH2M HILL announced that Ian Anderson has joined the firm as President of the Energy and Chemicals Business Group. Anderson received his bachelor's degree in mechanical engineering from Queens University and master's degree in business administration from Wilfred Laurier University in Ontario.

## MCCARTHY TO CEO

Qteros announced that John McCarthy has joined the company as President and Chief Executive Officer. McCarthy joins Qteros from Microbia, Inc.



John McCarthy

## PUBLISHER'S LETTER

CONTINUED FROM PAGE 3

*Cost and risk assessments will inevitably keep retailers and manufacturers scouring the globe for partners that can reduce both costs and risks and thus make their businesses more resilient. Just look at the number of multinationals that are shedding former acquisitions to concentrate on their primary revenue streams. As a result, global connectivity will continue to grow as companies search for ever increasing efficiencies in production. That means that supply optimizations is going to come under closer scrutiny than ever before. He believes that much greater efficiencies can be achieved if stakeholders implement what is called a "resilient supply chain", on page 19.*

*Nancy Gioia was named Director of Global Electrification at Ford in October of 2009. Ford developed a specially equipped plug-in hybrid that can communicate directly with the grid via smart meters provided by utilities through wireless networking. An integral part of Ford's electrification strategy is collaborating with electric utilities, she said on page 20.*

*Wish Flanagan*



# RENEWABLES IN ASCENDENCE

BY LYN CORUM, CLASS OF 2003



The landscape for power development in California has shifted. Wind, solar, geothermal and biomass project development requiring reviews now dominate the regulatory agencies.

The turn away from fossil fuel-based projects is the result of the state law requiring utilities to include 20% renewables by the end of 2010 in the electricity mix they sell to customers.

But no large utility will meet that date. They are expected to meet it somewhere in the 2012 to 2014 time frame, and yes, they will face fines but that has not been discussed yet. Meanwhile, the governor has issued an executive order requiring 33% renewables by 2020.

There are gas-fired power projects in the development pipeline but they've hit a regulatory firewall, at least in Southern California, and for at least a couple of years.

## MUNI BUILDS LAST GAS PLANT

The last fossil-fired power plant of any major size that will be built in Southern California in the near term received its permits for construction in March. The 200-MW simple-cycle Canyon Power Plant, being developed by the Southern California Public Power Authority will begin construction in Anaheim. The City of Anaheim's electric utility department will operate and deliver the power to city ratepayers.

Why is it the last power plant for now? Several other power projects, some of which could start construction soon, cannot move forward because of the lack emissions reduction credits on the open market or if they exist they cost millions of dollars.

Furthermore, the California Energy Commission, which certifies power plants, is putting off other work and racing to meet a December 31 deadline in their reviews of some of the 12 solar thermal permit applications so the developers can start construction by that date to qualify for federal stimulus funding.

SCPPA and Anaheim first submitted the project for certification in 2007 as a much larger project. Once the South Coast Air Quality Management District's ability to sell emission reduction credits to power plant developers was invalidated by a Los

Angeles Superior Court in 2008, the Canyon project was slimmed down to 200 MW.

The slimming down allowed Anaheim Public Utilities to revise its operating profile to 90 hours/month and 20 startup/shutdown events each/per month thereby reducing air emissions. It then purchased the small number of ERCs it needed from industrial sites that had mostly shut down. It still needs an additional two pounds/day of ERCs and has promised to buy them before it begins construction.

Normally, the CEC will not certify a project that falls short of its required amounts of ERCs, but here the amounts are small, and in one case derived from a calculation mistake made by SCAQMD late in the review process.

## ONCE-THROUGH COOLING DEAD

A larger and fairly stark picture of the state of power plant development in Southern California is illustrated by a petition AES filed with the California Energy Commission on March 1. It asked the CEC to extend the expiration date to December 31, 2020 of the certification of two boiler units at its Huntington Beach generating station.

AES rebuilt and upgraded two retired units, representing 450 MW under an expedited certification process in 2001 in the midst of California's energy crisis. The condition placed on the certification was that it would expire on September 30, 2011, with the expectation that the units would be retired or the entire generating station would be repowered.

AES indicated in its petition that it intends to file an application for certification to modernize the Huntington generating station by December 31, 2013. The plan is to first replace the rebuilt units, then replace the other two operating units on the site. Combined, the four units represent a nominal generating capacity of 850 MW. If it does not submit an application by that date, it will submit a closure plan and cease operating the rebuilt units.

Assuming it will seek certification, AES will have to acquire some ERCs, which it hopes will become available by 2013, possibly through enabling state legislation, but it is also facing another state policy change: the replacement of all once-through cooling systems on coastal plants. The California State Water Resources Control Board released draft regulations on March 23, which, when finalized will require owners of 19 power plants operating in the state to replace their once-through cooling systems.

The deadlines for this mandate will vary based on the utility's service territory where the plants are located. The control board estimated that it will take power plants in the Los Angeles basin until 2020 to construct replacement systems, given the

regulatory processes generating station owners must go through. This seems to be why AES chose the expiration date of December 31, 2020.

To summarize, the lack of emission reduction credits and the need to replace coastal once-through cooling systems are placing opposing pressures on generation owners. Thus, the four or five generating stations located within the SCAQMD service area which are impacted by the control board's once-through cooling rules may be stymied by the lack of ERCs required to do power plant upgrading.

It's not the State Water Quality Control Board's fault. It is required to develop standards for cooling water intake structures by the US Clean Water Act's Section 316(b) for existing plants. It conferred with the CEC, the California Public Utilities Commission, the California Independent System Operator, and other related agencies to develop realistic implementation schedules that will not disrupt the state's electric power supply. About 20,000 MW are involved, including the state's two nuclear power plants.

Furthermore, all of the power plants play critical roles in maintaining transmission reliability. By the nature of its ability to dispatch power, AES's Huntington Beach plant, along with the other plants along the Los Angeles coast line, is needed to support the integration of new renewable resources being built to the east and north of the Los Angeles basin once they are operational.

## RENEWABLES HEARTLAND

If you are looking for a site to develop a large wind, solar or geothermal project, take note. The County of Imperial Valley wants you.

The Imperial Valley in the southeastern corner of California is a very hot place during summer months, but in March, during the Renewable Energy Summit held near the border with Arizona, temperatures were balmy. The valley has probably the highest unemployment rate in the country – 25% – and the county and business leaders are eager to ride the economic winds promised by the “33% by 2020” renewable portfolio standard established by Governor Arnold Schwarzenegger last year.

As a result, San Diego Gas & Electric and Southern California Edison are signing power purchase agreements for solar projects as if their pants were on fire and with no risk behind their signatures.

## 40,000 MWS UNTAPPED

The Imperial Valley Economic Development Council is quick to point out that the valley has over 40,000 MW of untapped resources: 2,500 MW of geothermal, 28,900 MW of solar, 10,750 MW of

wind and 94 MW of biomass.

These are numbers that the California Energy Commission has published and are considered legitimate. Not only does IVEDC argue that the Imperial Valley is destined to lead California in the generation of clean energy, so does Dian Grueneich, a California Public Utilities Commissioner.

Addressing the 550 Renewable Energy Summit attendees on March 17, Grueneich said, “We can collectively make the Imperial Valley the area in the US and the world the greatest area for renewables.” She said the 25% unemployment rate is unacceptable and that the creation of a renewables industry in the county will create 50,000 direct and indirect new jobs.

The Imperial Valley already hosts close to a dozen geothermal power plants ringing the Salton Sea, the dominant landmark in the county.

Cal Energy, which operates 10 plants representing 327 MW there, and Ormat, which operates a 92-MW geothermal plant nearby, are the major geothermal operator/developers in the valley and are developing new plants.

There are newcomers as well. They have a long way to go before the potential 2,500 MW are fully developed.

The Imperial Irrigation District and the Los Angeles Department of Water and Power are negotiating to develop a 50-MW geothermal plant on adjacent properties they own near the Salton Sea in the known geothermal resource area.

However, that plan may be scuttled or delayed following the Los Angeles City Council's vetoing a rate surcharge that would have funded LADWP's share of the development costs.

## "SUN CATCHER"

Tessera Solar is planning to break ground by the end of the year on the 750 MW-Imperial Valley Solar project using Stirling Energy-built “Sun Catcher” solar dishes in Imperial Valley's desert. The project is expected to complete its review at the California Energy Commission with a decision on certification coming by September.

Tessera Solar was formed to develop projects and operate them using the concentrating solar technology that Stirling Energy created, based on the Stirling Engine.

There were a great number of energy companies represented at the Renewable Energy Summit. Sponsors included Ormat, SunEco Energy, Ram Power Corp. Tessera Solar, Rabobank, RECON, and CalEnergy Operating Corp. San Diego Gas & Electric and the Imperial Irrigation District provided the largest financial support, and they were the only utilities in attendance.

# TORYS' M&A 2010 TRENDS

## "BUYING GREEN" WILL GROW

We foresee demand for renewable energy assets continuing to grow in both Canada and the United States in 2010 and beyond for a number of reasons. First, large industrial emitters will be under continuing pressure to reduce their carbon footprint or otherwise to prepare for the impending regulation, in some form, of greenhouse gas emissions. One strategic way for emitters to address the impending regulatory burden in a carbon-constrained environment will be to own renewable energy or other "green" assets.

Second, to increase installed capacity of renewable energy, many jurisdictions have introduced programs to assist in the development and financing of renewable energy projects. A good example of such a program is the feed-in tariff (FIT Program) that the Ontario Power Authority introduced under the Green Energy and Green Economy Act, 2009 (Ontario). The FIT Program provides guaranteed and favourable pricing for many forms of renewable electricity generation. We expect the FIT Program to ultimately result in thousands of new megawatts of renewable energy capacity being connected to the Ontario grid. However, large amounts of capital investment will be needed to construct these renewable energy projects, many of which are currently being developed by smaller developers that do not necessarily have access to the capital ultimately required. Accordingly, in a capital-constrained environment, we expect that developers will seek partners to finance projects or that the developers will try to sell development projects to larger operators.

This combination of strategic demand for renewable energy assets and the financing requirements for developing new projects points to an active period in renewable energy M&A in 2010 and beyond.

## "JUST SAYING NO" MAY GET EASIER IN CANADA AND HARDER IN THE US

The decision of the Ontario Securities Commission in Neo Material Technologies (described below) and the musings of Vice Chancellor Leo Strine, Jr., of the Delaware Chancery Court, have revived the debate on both sides of the border on whether and when a target board may rely on a poison pill to "just say no" to a hostile takeover bid, preempting target shareholders from determining the outcome of the bid. Until the uncertainty created in Canada by Neo is clarified through further decisions, there is the prospect of more contested securities regulatory hearings in Canada on the use of poison pills as a defensive tactic.

The legal position on pills in Canada before Neo was well-settled. Whether or not the target corporation was in sale mode, securities regulators would not permit the target board to use a poison pill to prevent target shareholders from gaining access to an unsolicited offer and determining the outcome of the bid. At most, a target board could delay target-shareholder access to an offer in order to provide time for the board to seek out a better bid. But the only question was when – not whether – the pill would be cease-traded by securities regulators.

In Neo, the OSC signalled a possible change in approach. The OSC declined to cease-trade a pill deployed in the face of what the target board considered an undervalued and opportunistic bid in circumstances in which the target board was not seeking out a better offer and target shareholders had ratified the continued deployment of the pill. The OSC said that a pill can be maintained in the face of an unsolicited bid as long as it continued to serve the purpose of allowing the target board to fulfill its fiduciary duty to protect the long-term best interests of the target corporation. Neo raises at least the possibility that a target board may be permitted to "just say no" to an unsolicited bid that it considers, on reasonable grounds, a threat to the long-term best interests of the corporation – at least when, as in Neo, the continued deployment of the pill has been ratified by shareholders.

An interesting counterpoint to the possible expanded scope for pills in Canada occurred in Delaware. There, Vice Chancellor Strine, in a chambers appearance in the takeover battle between Broadcom Corporation and Emulex, appeared to be inviting a challenge to the use of a poison pill as a defensive tactic when coupled with a supermajority by-law provision relating to the calling of a special meeting.

Delaware courts have taken a generally deferential approach since the late 1980s to the use of pills to "just say no" to unsolicited offers if the target corporation was not for sale. This deferential approach appears to have been premised, in part, on the ballot box being open to target shareholders, making a proxy fight possible to replace a recalcitrant board. Vice Chancellor Strine, with reference to Emulex's adoption of a supermajority by-law, seems to be saying that if it can be shown that the ballot box is not open, "just say no" would not be allowed under Delaware law, and the Delaware court may order the target's poison pill to be redeemed. Accordingly, U.S. target boards may be more cautious in 2010 about the active steps they take to dis-

courage an unsolicited offer.

## CANADIANS WILL GO SHOPPING

There is an increasing trend for leading Canadian companies, pension funds and other investors to seek growth opportunities outside Canada. This is largely driven by Canadian demographics (as the population ages, consumption in many sectors of the economy decreases), low GDP growth rates and the relatively mature nature of the Canadian marketplace. For many industries, these factors lead to low domestic growth rates. In addition, the strong Canadian dollar, relative to the U.S. dollar, is helpful, particularly with respect to U.S. acquisitions.

Canadian financial institutions are currently well-positioned to purchase foreign assets. These institutions were fortunate to have suffered relatively fewer losses than many of their international peers during the financial crisis and have strong balance sheets and capital ratios. In fact, many of their international competitors will be sellers rather than buyers of international assets in order to de-lever their balance sheets and repatriate capital to their domestic operations. This is particularly true for institutions that now have a government as a major shareholder. Further, international institutions exiting a jurisdiction often have an inherent bias to sell to another international institution as a result of the "soft" M&A considerations, such as treatment of employees, customers and other local stakeholders.

Many Canadian pension funds still collect more than they pay out, so these funds have an inherent need to increase their investment activities. Their continuing cash inflow and increasing internal investment capabilities bode well for increased investment and M&A activity.

## CARVING OUT ASSETS WILL GET MESSY

The financial and economic crisis will continue to feed the spinoff market as distressed companies and oversized conglomerates seek to sell non-core assets and thereby enhance their balance sheets.

A spinoff transaction requires that a parent carve out a currently integrated business as a stand-alone. The issues involved in a carve-out include how to split assets and liabilities, how much debt the spun-out entity will take on and how much debt will remain with the parent, and what type of working relationships should be put in place between the parent and the spun-out entity. These issues are more difficult to resolve when, as is often the case in the current crisis, the transaction is born of necessity and little groundwork has been laid to prepare the spun-

out entity to operate on a stand-alone basis.

In addition, the parent will often be required to provide transitional services until the spun-out entity assembles its own information technology and other support systems and services; the parent may then need to participate in the migration of these services to the spun-out entity. These arrangements can be difficult to negotiate, not only because the spun-out entity often requires a wide range of services over an extended period of time but also because of the inherent tension in the arrangement: the spun-out entity seeks an outsourcing operation with the highest standards of performance for mission-critical functions, whereas the parent is not in the outsourcing business and is therefore ill-equipped to provide the service.

These dynamics complicate not only the terms of the transaction itself but also the sale process.

## HEIGHTENED SHAREHOLDER ACTIVISM

The economic crisis and corporate social responsibility agendas spurred shareholders into unprecedented action in 2009. Shareholder activism intensified and the strategies became more aggressive as shareholders found that forcing their own economic agendas in this manner could be easier, cheaper and more effective than acquiring additional voting equity to earn board representation or assume control.

Shareholders of all sizes pushed companies (and their boards) not only to enhance value through strategic transactions but often to unlock value for shareholders by selling non-strategic assets or freeing up cash reserves for dividends. We see this activism increasing in 2010.

In North America, regulators are facilitating increased shareholder involvement in response to activist shareholders who say the current rules are not allowing them to make their voices heard effectively. In 2010, equity holders, large and small, will continue their demands to formally exercise their democratic rights to have a say in corporate decisions.

## PRIVATE EQUITY

Private equity financial buyers on both sides of the border are poised to emerge from their long slumber. Financial buyers have been forced to the sidelines in the last two years, largely as a result of the scarcity of debt financing. There are strong signs that the Canadian and U.S. debt markets are back, and private equity players have begun to secure loans for their portfolio company acquisitions. Rates are higher and the quantity of debt may be

*(continued page 18)*

# SMARTER ENERGY CITIES

BY BOB GILLIGAN



## THE SITUATION TODAY

The world is on the verge of a shift from predominantly rural to mainly urban. In 2007, less than half the world's people lived in urban areas. By 2030, urban dwellers will make up roughly 60 percent of the world's population.

The world's regions differ greatly in their levels of urbanization. In North America, Europe, Latin America and the Caribbean, more than 70 percent of the population is already urban; but in Africa and Asia, less than 40 percent of the population is urban.

The largest cities in the world are slowly growing in size, and increasingly, they are located in less developed regions. In 1950, the three largest cities were New York-Newark (12.3 million), Tokyo (11.3 million) and London (8.4 million).

## UN PROJECTS

By 2015, the United Nations projects that Mumbai and Mexico City will have replaced London and New York-Newark in the top three: Tokyo at 35.5 million, Mumbai at 21.9 million and Mexico City at 21.6 million.

Cities derive their influence from a favorable mix of skilled labor, infrastructure and industry—what economists refer to as an “agglomeration economy.”

Taken together, agglomeration economies achieve higher output per capita than their host nations, and they tend to generate and concentrate innovation.

Cities and countries are united in their desire to remain competitive in a globalized economy. Increasingly, competitiveness will be determined by their ability to grow in a prosperous yet sustainable manner.

Livability will become just as important as productivity, so countries will need to pursue public policies that strike a balance between the seemingly contradictory goals of prosperity and sustainability.

Cities only cover about 2 percent of the Earth's surface area, yet cities and urban areas consume 75 percent of the world's energy and are responsible for more than 75 percent of its emissions.

The effects of climate change are often more keenly felt in cities (i.e. the Urban Heat Island effect).

Since many of the world's major cities are close to the sea, rising sea levels are a major threat.

The good news—the concentration of resources in cities can be a useful weapon in fighting climate change.

Cities are often centers of new thinking and policy innovation and will likely be more accepting and engaged in new technology.

Cities are in a great position to lead the way for others to follow. When novel approaches for battling climate change are proven successful, they can serve as models for deployment in similar cities.

## ELECTRICITY AT THE HEART OF THE DILEMMA

Global energy demand is expected to double by 2030 and then triple by 2050, requiring significant capacity increases in the face of natural fossil fuel resource constraints.

Electricity generation accounts for 40 percent of greenhouse gas emissions. As the international community coalesces around the need to mitigate climate change, countries must find ways to develop sustainable growth strategies to remain competitive in a carbon-constrained economy.

Residential electricity pricing is on the rise across the globe. Between 2000 and 2007, rates increased an average of 42 percent in the United States and an astounding 105 percent in the United Kingdom. Consumers are seeking more control over their energy costs and usage.

## SMART GRID IS THE ENERGY INTERNET

The smart grid marries IT with the current electrical infrastructure, helping to support the 21st century's energy needs. The smart grid is essentially an “energy internet,” delivering real-time information and knowledge—empowering smarter energy choices and delivering significant benefits.

These benefits include optimizing renewable energy sources and enabling broader penetration, delivering increased energy efficiencies and decreased carbon emissions, increasing power reliability and operational efficiencies, delivering greater productivity, and empowering consumers to manage their energy usage and providing information to help them save money without compromising their lifestyle.

## BENEFITS OF A SMARTER GRID FOR CITIES

First and foremost, it means more control, more line of site and potentially

lower bills. With dynamic pricing signals, consumers can opt to use power when it's less expensive. And studies have shown that consumers can save an average of 10 percent and up to 15 percent during peak. Conservation is less expensive than new generation and is also better for the environment [source: ACEEE and EIA]. But it's more than that. Smart homes will make control EASIER.

With smart grid knowledge, demand response systems will react to actual, rather than estimated, demand portfolios, enabling utilities to shift and lower demand for the most economic generation mix.

Altering non-critical loads (i.e. pool pumps and defrost cycle on refrigerator) lowers the need for expensive peaking power plants, while maintaining levels of function and comfort for customers.

## THE SMART GRID AT WORK

The smart grid is not a future vision. The technology exists today and is proven. A good example of a smart city is the Energy Smart Florida project. GE is helping Florida Power & Light with smart grid technology for this project.

GE smart meters are being installed at FPL customer homes, providing consumers with the power to understand their energy usage.

GE's intelligent network-control software will be able to anticipate demand and allocate resources more efficiently and productively.

When unforeseen outages do occur, GE's solutions will reroute power around problem areas, reducing the number of people affected.

GE solutions also can locate and identify outage cause and plot logical solutions—accurately dispatching resources more efficiently.

Future consumer benefits will include PHEV support and smart appliances. Using today's installed smart meters, Florida plug-in car drivers will have a powerful incentive to put off their charging until later at night, when energy demand is significantly lower.

In the future, a new breed of smart appliances will be able to communicate with smart meters to make energy decisions. For example, automatically rescheduling high-energy functions or switching to lower consumption modes during peak energy demand periods.

Other future consumer savings opportunities could include programmable and smart-meter controlled thermostats for heating and cooling.

Future demand management and demand response programs could also interact with smart meters to control consumer appliances, lighting and other devices, such as pool pumps, to reduce energy consumption at peak times

Other examples include projects in Hawaii and Ohio. GE will leverage cutting-edge smart grid technologies to optimize the integration of high-penetration renewable power on the island of Hawaii, creating a benchmark for the nation.

GE is providing both technologies and consulting services to help the island achieve its goal of meeting 70 percent of its energy needs (electricity and transportation) from renewables by 2030.

After a successful smart meter pilot project in South Bend, Ind., GE is working closely with AEP on its gridSMART Ohio project, which received \$75 million in demonstration grant dollars (total project \$150MM).

AEP Ohio's \$150 million project will be deployed in northeast central Ohio and will include the installation of approximately 110,000 advanced electricity meters (GE); new distribution grid technology; distributed energy sources; plug-in hybrid electric vehicles; smart appliances; and consumer systems and products to help customers manage electricity use and costs. Elements all designed to demonstrate the full benefits of a installing a comprehensive distribution smart grid for consumers and the utility.

## GOVERNMENT SUPPORT

This is what has happened in the United States because stimulus dollars focused on delivering a smarter, more automated power grid. With government support, the industry reacted and the collaboration of key market players took form resulting in a very holistic approach to create a technology beacon. When these factors are combined together, it works and happens quickly. The technology is here now, what is needed is for the policy to drive at national levels across the globe and the key parties to invest. GE is ready to play its part in the development of smarter more sustainable cities.

Mr. Gilligan is vice president of transmission & distribution (T&D) for GE Energy Services and an officer of the General Electric Company. The T&D business provides integrated smart grid solutions and reliable power delivery systems to electric utilities. Smart grid is the marriage of information and automation technologies with electrical infrastructure to support 21st Century global energy needs.

The business also supports the oil & gas, critical infrastructure and industrial sectors with innovative technology solutions.

Mr. Gilligan holds an MBA from the Wharton School, University of Pennsylvania and a bachelor's degree in Mechanical Engineering from Bucknell University. He's an advisor to the MIT Energy Initiative's "Future of the Grid."

## CLEAN OVER GREEN: OIL AND GAS IN A LOW-CARBON FUTURE

BY JOSEPH A. STANISLAW, CLASS OF 2009



Even with the world having reached a modicum of consensus in Copenhagen, it is becoming clear that the global obsession with anything green has subsided. This is a good thing. We can now move from breathless anticipation of a green dawn, to the more sober work of systematically and thoughtfully building toward a low-carbon future.

A big part of this effort will involve fossil fuels. Natural gas, oil and coal should be given their due as crucial fuels of the coming decades. There is a commonly held view that we cannot transition to a carbon-neutral world without them.

### THE REASONS FOR THIS ARE CLEAR.

First, too much of the world's infrastructure is built for fossil fuels and it will take decades to retrofit it for new and renewable sources of energy.

Take America's 211,000 miles of high-voltage power lines: Transforming this grid so it can take full advantage of renewable energy sources would cost \$13 billion annually over 10 years. By contrast, the stimulus allocated \$6 billion to the grid over two years—China's stimulus bill allotted \$75 billion for the same purpose.

Second, fossil fuels both are in abundance and have the potential to be sources of relatively clean energy.

Take natural gas, which provides 22 percent of America's electricity. Not only is it the cleanest of the fossil fuels, the industry has reduced emissions by 36 percent since 1980. And America's reserves of natural gas have doubled over the past two years, thanks specifically to dramatic advances in technology used to produce shale gas.

The U.S. now has a 100-year supply of natural gas at current consumption levels. Meanwhile, LNG capacity also is increasing.

Congress and the Administration should consider redoubling their commitment to creating a level playing field in which all fuels—traditional and new—are

encouraged to become cleaner (while also factoring in their cost).

Incentives should be provided to remove carbon from oil and gas, as well as from coal; the best way to do this is to put a price on carbon.

### PRICE ON CARBON

If policymakers allow the current market conditions to persist by disadvantaging natural gas and oil, thus upending the balance in supply and demand, they could be laying the groundwork for another possible energy crisis with serious ramifications for the broader economy. A similar dysfunction exists in Europe, where take-or-pay contracts are distorting the natural gas market.

But the oil and natural gas markets face challenges beyond the policy front. Both are suffering from a collapse in demand. Globally, oil demand has fallen over 2 million barrels a day within the past two years. Both oil and natural gas markets have witnessed and continue to witness oversupply.

### NATURAL GAS

With natural gas, the long hoped-for increase in LNG has happened; but unfortunately it is happening exactly at the moment when demand has collapsed. Every spare LNG cargo has very low marginal cost and thus continues to be sent into already oversupplied markets, depressing spot prices. These spare cargoes are not going to Asia, but to North America and Europe, aggravating already severe imbalances in demand and challenging the take-or-pay contracts in European markets in particular.

One key to correcting the market imbalances might be Asian demand, which is expected to continue to rise and could thus absorb these spare cargoes. What is not clear is what this will do to prices in Europe and North America. Meanwhile, shale gas supplies in the U.S. also are on the rise despite the oversupplied market, as many producers are compelled to produce—if they do not, they will lose their licenses to drill.

So, until the economic crisis is behind us and demand recovers, the market will remain in distress, thereby subverting the positive role natural gas should be playing in the drive to a clean energy future.

### ENERGY NATIONALISM

In addition, the energy nationalism of resource-rich countries is challenging the

global oil markets.

This reality is captured in a simple statistic: In 1978, the major international oil companies controlled production from 70 percent of oil and gas reserves; today, they control production from about 10 percent, with the balance in the hands of national or state-dominated oil companies. In the race for global resources, Western companies are at a clear disadvantage in these closed markets—despite the fact that the international oil majors are more efficient at producing oil.

If a Chinese company wants an oil project in Nigeria, Beijing can deploy massive foreign aid as a carrot; the U.S. and Europe cannot do the same.

This dynamic is putting at risk the world's ability to increase supplies, at exactly the time when we will need the increased supplies—particularly to meet the energy appetites of China, India, and others.

The time, therefore, has come for resource-rich countries to rethink how they can maintain control of their resources, while optimizing production by accessing the technology of the private sector, thus creating a win-win-win for themselves, the companies, and consumers.

### EMERGING MARKETS

The insatiable thirst for energy in emerging markets, and the already large demand in the developed world, are reasons that—even as new and renewable energy forms have been coming on line—demand for fossil fuels continues to grow. Daily global consumption of oil rose by 9.4 million barrels per day between 2000 and 2007 – and 85 percent of this growth was due to demand in emerging markets.

The Obama administration has made its mark by resetting the national energy priorities. But, in so doing, it has treated oil and gas almost like second-class citizens, invoking them only in the context of increasing their taxes and reducing their subsidies.

Natural gas, the cleanest of the fossil fuels, could be given a greater role in the Obama Administration's game plan. More broadly, the definition of "clean energy" could include clean coal; natural gas as it is, as well as even cleaner natural gas; and clean oil. Clean means clean. Period.

The technology race to drive carbon out of coal could be broadened to drive it out of oil and gas, too. Some companies are, in fact, working on demonstration projects to remove carbon from natural gas.

Simply put, it will likely be very difficult for the U.S. to cross the bridge to a low-carbon and a clean-development future

without mobilizing the American oil and gas industries.

To accelerate this process, all energy forms, including fossil fuels, could be allowed to compete within a framework set by the government. Whatever fuels meet the policy demands, and can adjust to the carbon costs, and the carbon reduction goals, should be able to play the game.

Another consideration: the oil and gas industries generate hundreds of thousands of highly skilled, high-paying jobs.

These are skills and positions that, once lost, are unlikely to return. This neglect also is evident in our commitment to educating the engineers skilled in traditional fuel technologies.

Today, there are just 2,000 students being trained in petroleum engineering sciences in western Europe and North America combined. By contrast, a single institute in Moscow alone is home to 8,000 such students—and Russia has five similar institutes.

The old West is forfeiting future leadership in this industry.

Of course, the oil and gas industries could do their part by committing to developing carbon-neutral technology.

At the top of their goals could be to produce ever-cleaner oil, natural gas, and coal. Within a generation, we should only be talking about "clean oil," "clean natural gas," and "clean coal". This can happen within an enlightened and fair policy framework.

With the right policy framework and the ingenuity long demonstrated by the oil and gas industries, the problem can be a big part of the solution.

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Dr. Joseph A. Stanislaw is an energy industry leader, advisor, strategist and commentator with over 30 years of industry experience.

He advises Deloitte's U.S. and global energy industry leadership on future trends in the global energy market, and assists in shaping responses to those developments, focusing on sustainable emerging technologies and innovation.

Dr. Stanislaw is founder of the advisory firm The JA Stanislaw Group, LLC, specializing in strategic thinking and investment in energy and technology.

He is co-founder and former president and chief executive officer of Cambridge Energy Research Associates (CERA).

# CHINA FORMS SUPER MINISTRY

BY JOHN Z.L. HUANG



On January 28, 2010, the Chinese central government officially announced the formation of the National Energy Commission (NEC).

The NEC will be headed by Premier Wen Jiabao and will consist of 22 other high-level government officials, including Vice Premier Li Keqiang (who will serve as deputy head) as well as the top leaders of the National Development and Reform Commission (NDRC) and the ministries of finance, environmental protection, land and resources, and foreign affairs. The seniority of the NEC members is a clear indication of the central government's commitment to overcoming the bureaucratic infighting that has made it exceedingly difficult to secure cooperation between the relevant players—including government agencies and large state-owned energy companies—on energy initiatives considered vital to sustaining China's economic growth.

## BACKGROUND

With the meteoric rise of its economy, beginning with the advent of the Reform and Opening Up policy in December 1978, China has become both a major energy producer and consumer in the world today. Not surprisingly, this rapid development has also been accompanied by growing pains. In attempting to meet the ever-increasing energy demands of a population of 1.3 billion fanned out over an area of 9.6 million square kilometers, China's government and domestic energy industry have faced a multitude of challenges. How these challenges have been handled has led to a great deal of criticism, domestically and internationally.

On the domestic front, China's leaders have had to contend with the increasingly boisterous outcry from its population regarding, among other energy-related matters, environmental degradation on a massive scale, coal mining accidents, fuel shortages and rolling brownouts. Moreover, criticism from some influential members of the international community has also been

forthcoming as a result of China's perceived reluctance to adopt international norms, including its stance on the reduction of carbon emissions in order to combat global warming and its willingness to overlook the darker side of some of its business partners while it conducts an aggressive campaign to secure overseas energy supplies.

It is fair to say that much of the above criticism has been a result of the fragmented nature of China's system for managing its energy policy. For example, unlike most countries that consume and/or produce energy to a similar extent, China does not have a ministry of energy. In fact, prior to the creation of the NEC, the existing government authorities handling energy-related matters at the national level have been the relatively low-ranking National Energy Administration (NEA), under the NDRC (China's main planning agency), and the National Energy Leading Group, under the State Council (China's Cabinet). The combined total staff of these organizations is approximately 200. (By contrast, the US Department of Energy has about 4,000 employees dedicated to energy matters.)

Such minimal capacity, coupled with a lack of political clout, has led many experts to deem these authorities unable to cope with the scale of energy issues that China faces. Furthermore, various energy sectors, including those respectively dedicated to coal, oil and gas, are controlled and operated by other powerful government authorities and large state-owned enterprises. These various actors often have differing strategic interests that at times have led to clashes that ultimately have harmed Chinese consumers.

In this regard, the fuel shortages experienced in China at the end of 2007 provide an instructive example. Because of the record high cost of crude oil at the time and an inability to pass on that cost to the consumer because of government controls, Chinese oil companies did not expand their refining activities despite the increasing demand for fuel. As a result, fuel supplies ran low, leading to long lines at gas pumps and the disruption of trucking services throughout the nation.

Partly in response to the negative fallout from this fuel-shortage debacle, in March 2008 the People's Congress approved a proposal to create two new bodies - the aforementioned NEA (which was established in March 2008 and replaced the now defunct Energy Bureau under the NDRC) and the NEC, which had been intended to replace the National Energy Leading Group. However, it was reported that the NDRC initially resisted the attempt to set up an authority as powerful as the NEC. (Although the precise reasons for the NDRC's reluctance remain unclear, the fact that it took nearly two years to formally

announce the formation of the NEC readily illustrates the depth of the power struggles at play.)

Out of this background, the NEC has been established as a "super-ministry" charged with taking the reins and exerting control over the relevant actors.

## IMPLICATIONS FOR CHINA'S ENERGY INDUSTRY

According to a notice released by the general office of the State Council, the NEC will be in charge of formulating energy development strategy, reviewing energy-security policies and coordinating international cooperation. Moreover, the existing NEA will be subordinate to the NEC, but will continue to be responsible for the drafting and implementation of energy plans, industrial policies and standards.

The NEC will also outrank all other government departments and state-owned enterprises that are currently in charge of the various energy sectors. Although NEC decisions will still require approval by the State Council, given the seniority of its members it is well positioned to coordinate all such decisions made concerning energy policy.

There are two areas where the introduction of the NEC will likely create an immediate impact: renewable energy and energy security.

Since the United Nations Climate Change Conference was held in late 2009 in Copenhagen, China has issued a series of policies and regulations in an effort to boost the country's renewable energy sector. As a result of its plenary powers, the NEC will have the heft to push forward many of the green initiatives that otherwise might have stalled prior to its formation.

Another top priority of the NEC will relate to energy security. Given China's concern over being too reliant upon energy imports (it became a net importer of oil in 1993), it is anticipated that the NEC will spur the development of additional onshore energy projects as well as the acquisition of offshore energy projects by large state-owned enterprises. In particular, the NEC will be instrumental in facilitating the completion of the various administrative formalities required to approve and finance such plans.

In sum, as the NEC begins to flex its administrative muscle in various sectors, such actions will provide telltale signs as to what China's leaders have deemed to be their top priorities within the energy field.

John Z.L. Huang is a founding partner of MWE China Law Offices and serves as its managing partner. David J.D. Dai, a partner of MWE based in Shanghai and Carlo Carani, foreign counsel for MWE, contributed to this article.

## FLANAGAN-IRENA CONTINUED FROM PAGE 1

In answer to a question on the UAE's decision to pursue nuclear energy, Dr. Al Jaber said the UAE is looking for a "balanced energy mix."

Pelosse's priorities for 2010 include recruitment of staff positions of fifty percent women to reach gender parity and to continue outreach to the International Energy Agency, UN and the International Panel on Climate Change (IPCC).

IRENA was established in Bonn, Germany in January, 2009 at the first IRENA session with 70 members. The second session was held in June of '09 at Sharm Al Sheikh where IRENA members designated Abu Dhabi to be its new headquarters site and appointed Hélène Pelosse as its interim Director General.

IRENA and UNOPS signed an agreement for UNOPS to provide administrative, personnel, financial management and legal functions to IRENA. Ms. Pelosse said at the signing in Copenhagen, "UNOPS expertise in service provision will boost IRENA's take-off."

IRENA's Third Session coincided with the Third World Foreign Energy Summit where IRENA was one of the 600 plus exhibitors. Solar power was featured prominently in this year's WFES with over 160 of the world's largest solar power companies exhibiting.

Twelve solar companies signed a memorandum of understanding in Munich in July 2009 to form the "Desertec Industrial Initiative Planning Company." DII will build large scale power plants in the desert regions of the Middle East and North Africa (MENA REGION). The total investment is estimated at 400 billion euros by 2050. Fifteen percent would supply Europe with high-voltage direct current transmission technology. DII will also contribute towards improving the infrastructure and standard of living in the MENA region.

Hélène Pelosse is Interim Director-General, International Renewable Energy Agency (IRENA). She was the advisor in Angela Merkel's office during the German presidency of the EU where she helped adopt EU political objectives on energy efficiency, renewable energy and GHG emissions. Since 2007, she has served as Deputy Head of Staff in the private office of the French Minister for Ecology, Energy, and Sustainable Development. On June 29, 2009 Ms. Pelosse was elected Interim Director-General of IRENA by its member states.

Dr. Sultan Al Jaber was featured in the Class of 2010, World-Gen, V.22, #1, Jan/Feb 2010. Also on [www.world-gen.com](http://www.world-gen.com).

# INCONSISTENCIES IN PROJECT CATEGORIZATION UNDER THE EQUATOR PRINCIPLES

BY WILLIAM STARK

Since the World Bank Group (WBG) was originally formed after World War II, there has been a need for guidelines to promote consistency in project financing. With this in mind, various policies and guidelines were developed by the WBG and one of its members, the International Finance Corporation (IFC). The policies were similar in many ways, but the WBG focused primarily on bank procedures and environmental standards, while the IFC focused primarily on social policies. To blend these ideas, Equator Principles (EP) were developed to manage social and environmental issues in project financing.

First published in June 2003, the EP set standards so that projects financed by participating financial institutions are developed in a manner that is socially responsible and reflective of sound environmental management practices. The Principles apply to all project financings with capital costs greater than \$10 million and are not applied retroactively or for refinancing. They are intended to help avoid, where possible, negative impacts on ecosystems and communities as a result of project development. Where impacts are unavoidable, the EP requires that impacts be appropriately reduced, mitigated, and compensated for.

The current EP were published in July 2006 and include the requirement to evaluate projects and classify each one into one of three categories:

## THREE CATEGORIES

**Category A:** projects with potential significant adverse social or environmental impacts that are diverse, irreversible, or unprecedented;

**Category B:** projects with potential limited adverse social or environmental impacts that are few in number, generally site specific, largely reversible, and readily addressed through mitigation measures; and

**Category C:** projects with minimal or no social or environmental impacts.

Since 2006, some financial institutions have developed specific categorization criteria, while others have not. Still other lenders have developed criteria that are no more specific than the EP themselves. As a result, the categorization of projects is implemented on a continuum scale, with one end of the scale being Category C projects and the other end of the scale being Category A projects.

The exact placement of a project on this scale depends on the specific views of a given lender. For instance, some lenders categorize large-scale projects in identified industries or sectors, such as the power

industry, as Category A projects due to diverse impacts such as greenhouse gas emissions, land use impacts, and water impacts. Other lenders may categorize the same project as a Category B project because they place more emphasis on the project's ability to comply with local regulations and regulations of the World Bank and less emphasis on the irreversible impacts to communities and resources whose commitment may be viewed as necessary to satisfy or meet local needs. At times, mitigating circumstances may allow what would otherwise be a Category A project to be categorized as a Category B project. Such mitigating circumstances could include the use of stringent pollution control technologies beyond what is typically employed, such as the use of selective catalytic reduction for additional emissions control on boilers equipped with low nitrogen oxides burners and emission reduction projects to offset existing projects emissions. These, as well as other considerations, are taken into account when categorizing a project. Thus, project categorization may not necessarily be a straightforward exercise.

## "EP" REPORTS

The financial institutions that have adopted the Principles are required to report annually on their implementation of the Principles and, as of June 2008, a total of 43 reports were available on the EP web site ([www.equator-principles.com](http://www.equator-principles.com)). A review of these reports indicates a wide variation in the depth and quality of the reporting, ranging from a one paragraph summary to comprehensive reports covering not only the EP, but also topics such as sustainability, carbon emissions, and corporate responsibility. Many reports include a compilation of the number of projects financed according to category, but only a few reports included data on the type of project, such as infrastructure, mining, agriculture, power, or natural resources, along with the categorization.

Out of 1,711 projects reported by 31 financial institutions, more than 65 percent were labeled Category B projects, with approximately 10 percent and 25 percent labeled Category A and Category C, respectively. Although the general trend indicated substantial numbers of Category B projects, a review of the data shows that some banks engaged in a relatively high number of Category A transactions, either in total numbers or in proportion to the total they reported. The data indicates a handful of banks characterized between 20 and 40 percent of their total projects as Category A. However, nearly 20 percent of the banks did not report any Category A

projects and the same percentage did not report any Category C projects.

This wide variation in the categorization of projects by different participating financial institutions strongly suggests differences in application of views and guidelines on project categorization. For example, a typical thermal power generation facility may have multiple lenders, each with a different view on categorization. However, a review of the EP shows that for large thermal power projects located in either non-Organization of Economic Cooperation and Development (OECD) countries or OECD countries not designated as high income (as defined by the World Bank Development Indicators Database), there is no difference in the EP requirements for Category A and Category B projects. In each case the project is required to meet the requirements of all 10 of the EP, including the underlying IFC Performance Standards, IFC General Environmental, Health, and Safety Guidelines, and IFC Environmental, Health, and Safety Guidelines for Thermal Power Plants.

## FINANCIAL INSTITUTIONS

As financial institutions move forward under the EP, they should keep in mind that project categorization must be flexible to allow various lenders to comply with their own standards and evaluation criteria. In addition, the various lenders should be conscious of the fact that when categorizing a project such as a large thermal power generation facility, the actual categorization as A or B may not be of great importance because many Category A and B projects will have very similar, if not identical, requirements. In these situations, the categorization may matter to the lenders as far as the number of projects financed that are assigned to a particular category, but the categorization will have little or no effect on the social and environmental studies required for project approval, financing, and construction. Nor will the categorization have a significant impact on the monitoring, recordkeeping, and reporting requirements necessary for EP compliance. These considerations, along with a flexible view on categorization, may allow for a much smoother process and create less disagreement among various financial institutions regarding project categorization.

William Stark is a Senior Consultant in the Energy Consulting and Engineering Operations Group of R. W. Beck, a SAIC company. He is involved in the financing of energy industry projects and directs EP categorization and compliance reviews for projects throughout the world.

## TORYS'-TRENDS CONTINUED FROM PAGE 14

reduced, but debt is now available to facilitate completion of deals. Given the more pronounced easing of credit conditions in Canada, coupled with the relatively stable state of the Canadian economy, we expect that Canadian targets will be of particular interest to both Canadian and U.S. private equity buyers in 2010.

Against this positive backdrop, the private equity buyout market continues to face headwinds. For many companies that don't need to sell, there remains a disconnect between seller and buyer on the most important deal term: valuation. This disconnect could either result in the use of mechanisms (such as earnouts, multiple-stage closings or guaranteed exit mechanisms) to bridge the gap or slow the re-emergence of private equity buyers until convincing evidence appears to resolve the debate.

## ASSETS WILL CHANGE HANDS

The market is ripe for merger and acquisition activity in the media and telecom sectors. The recession, declining advertising revenues and increasing competition from the Internet and other non-traditional media continue to put financial pressure on conventional over-the-air broadcasters.

We expect these pressures and ongoing changes in the demand for media to put individual assets or groups of assets into play. We also see these pressures prompting some media companies to streamline their activities and shore up their capital structures by exiting non-core or unprofitable businesses. The recent closures and sales of local television stations may signal this trend.

Structural changes in the wireless market will also likely lead to asset movement. Several new entrants that emerged from the 2008 AWS spectrum auction are in the process of launching or will launch in 2010, with incumbents responding by upgrading their networks and adjusting their offerings. The Canadian government will also auction off the 700 MHz spectrum that will be made available from the transition to digital television, thereby also potentially creating opportunities for new entrants. We expect that these changes and developments will likely result in increased M&A activity and strategic partnerships among new entrants and incumbents alike.

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# CREATING A RESILIENT SUPPLY CHAIN

BY STEPHEN F. DEANGELIS, CLASS OF 2008



In spite of the growing chatter about the coming "de-globalization," we see scant evidence that the decades-long push to integrate trade is coming to an end. Cost and risk assessments will inevitably keep retailers and manufacturers scouring the globe for partners that can reduce both costs and risks and, thus, make their businesses more resilient. The more highly specialized a global firm becomes, the more dependent it becomes on the reliability of its suppliers. Specialization is increasing not decreasing. Just look at the number of multinationals that are shedding former acquisitions to concentrate on their primary revenue streams. As a result, global connectivity will continue to grow as companies search for ever increasing efficiencies in production. Logistical chains will continue to be glue that holds this system together. That means that supply optimization is going to come under closer scrutiny than ever before. We believe that much greater efficiencies can be achieved if stakeholders implement what we call a "resilient supply chain."

## GLOBALIZATION CONTINUES

Before discussing the details of a resilient supply chain, we'd like to reinforce why we believe that globalization will continue unabated. Most obviously, the outsourcing of manufacturing over the last three decades has created enormous interdependencies.

As a result, many global corporations now seek to mitigate risks through strategies of vertical integration. In emerging market countries, most notably China, there is a push to secure access to key raw materials and energy reserves. The same is true for many vulnerable, but cash-rich states on the question of food supply, what *The Economist* has dubbed "outsourcing's third wave." The clear trend is for deals to exclude more and more middle men, with some companies preferring ownership over negotiation.

Rather than signaling the end of glob-

alization, these trends suggest a deepening of connectivity – dashed horizontal lines replaced by solid vertical ones. America's own history as a precursor to modern (read: post-colonial) globalization suggests that the world now stands on the verge of a lengthy era of supply-chain consolidation. Rather than see supply chain numbers diminish dramatically, we expect to see these chains increasingly "hardened" in terms of ownership, regulation, security and optimization (especially in terms of energy intensity).

This Darwinian shake-out does mean that weak links will not survive. But the big losers will be found in the large universe of middlemen and distributors who have historically filled the gap between primary producers (e.g., factories, farms) and end-point retailers. Optimization implicitly addresses waste and redundancy and middlemen often represent both.

There is a natural adversarial relationship between producers and retailers: Producers want to send retailers as much product as possible and retailers only want to accept as much as can be readily sold to consumers. Producers want to increase their profit margins and retailers want to reduce them so that they can increase their own profit margins. Middlemen often served arbiters in this adversarial system but in doing so reduced the profit margins on both sides.

Nevertheless, they were tolerated as long as they reliably managed the supply-demand interface. This useful, if uncomfortable, arrangement was fine for small- and medium-sized businesses; but, its inefficiencies were exposed as companies became more global.

## 'GLOBALLY INTEGRATED ENTERPRISES'

As the biggest retailers have gone truly global, they are moving rapidly in the direction of becoming what IBM Chairman Sam Palmisano calls "globally integrated enterprises." When it comes to supply chains, Walmart is the standard-bearer. Other major retailers, however, more closely resemble 20th-century multinational corporations – i.e., confederations of regionally derived and thus largely compartmentalized subsidiaries. If they fail to change with the times, they will eventually be confined to niche markets or consigned to the dust heap of histories failed businesses.

Our company believes that it can improve corporate supply chains for those on the way to becoming globally integrated enterprises as well as those on the way to obscurity if they fail to change.

The signs of change have already begun to appear in what can be viewed as a supply-chain "Reformation" with far-ranging implications. Many of these globally inte-

grated retailers are seeking a far more direct connection to their suppliers.

*The Financial Times*, for example, ran a front-page story on Walmart's drive "to cut billions of dollars of costs from its supply chain by combining its store purchasing across national frontiers in a fresh stage of the globalization of its business." The effort by the world's largest retailer is part of a plan to buy more of its goods directly from manufacturers, rather than from – yup, you guessed it – middlemen.

Walmart's business strategy reflects its success as both a purveyor of globalization's connectivity and a beneficiary of commerce's golden rule – namely, size matters. Walmart's scale of operations is such that manufacturers have little choice but to accede to its demands for direct purchasing, and those savings – estimated at 5 percent to 15 percent across its entire supply chain – are too big for Walmart to ignore. Walmart's competitors will likewise have no choice but to try and match its efforts at supply chain consolidation. Why? Because the growth vector for companies is not going to be in developed countries but in emerging market countries. Selling to an emerging global middle class will not be like selling to the established middle class in mid-America.

## EMERGING GLOBAL MIDDLE CLASS

The great retail race to meet the demand expectations of an emerging global middle class begins in earnest as the "Great Recession" wanes, with tighter global supply chains a positive byproduct. Tighter global supply chains become even more important when globally integrated enterprises move beyond selling to the emerging middle class and sell also to a billion people at the bottom of the economic pyramid. With razor thin profits to be made (but profits nonetheless), retailers must have optimized supply chains to market successfully to lower middle class and poor consumers.

Besides increased profit margins, tighter supply chains can also help increase consumer safety. Let's return to the case of Walmart. Walmart's campaign will initially focus on "direct purchasing of its fresh fruit and vegetables on a global basis," but then expand to other categories (e.g., seafood, frozen food, dry-packaged goods).

Bob Ferrari, a blogger and supply chain analyst, wonders if Walmart has asked itself two important questions: "What happens if a salmonella infected fruit or vegetable needs to be backward traced through the supply chain? Will Wal-Mart assume primary risk as the primary purchaser and distributor of goods?"

We believe they will. A tighter supply chain means that Walmart will have to dive

even deeper inside producer chains throughout the developing world – hardly the stuff of globalization's "retreat." Walmart's increased attention will also mean increased attention by suppliers. Walmart contracts are lucrative and to risk losing one because of the safety of your product is not a pleasant prospect. Talk to any farmers cooperative in any developing country that has recently welcomed Walmart; you'll find this new, closer relationship has created dynamic socio-economic change of the most profound sort.

Ferrari's first question still needs to be addressed however. What happens if an infected food supply needs to be traced back to its origin? A tighter supply chain certainly helps reduce that audit trail, but so could a resilient supply chain that could almost instantaneously provide such information. Indeed, by tightening supply chains, Walmart and other globally integrated retailers are indirectly trailblazing ways to address a looming security loophole. Few analysts doubt that transnational terrorists will ultimately target the world's highly distributed food chains for disruption and death-dealing; but you don't have to be a conspiracy theorist to understand how deadly even accidentally infected food can be. Walmart is firing the first shot in the supply chain revolution, but it remains early in the competition and technologies are just now emerging that permit the development of a resilient supply chain; the topic to which we next turn.

## DEVELOPING SUPPLY CHAIN

Most people in the commercial are familiar with Electronic Data Interchange (or EDI). It is the structured transmission of data between organizations by electronic means; for example, transaction documents from one trading partner to another. Although that may sound like email with an attachment, it is much more controlled and secure.

What makes EDI work is a family of standards. The National Institute of Standards and Technology in a 1996 publication defined Electronic Data Interchange as "the computer-to-computer interchange of strictly formatted messages that represent documents other than monetary instruments. EDI implies a sequence of messages between two parties, either of whom may serve as originator or recipient. The formatted data representing the documents may be transmitted from originator to recipient via telecommunications or physically transported on electronic storage media." The system is considered secure, because "the usual processing of received messages is by computer only. Human

(continued page 20)

## INVESTING IN ELECTRIFICATION

BY NANCY GIOIA



Recent years have laid the groundwork for battery electric and plug-in hybrid electric vehicles to become a reality on the roads. Developments in battery technology, growing concerns over climate change and government incentives are converging to advance this alternative form of transportation. Automakers around the world are working to bring electrified vehicles to market as one part of the solution to use new, alternative forms of energy in the future.

In 2010, Ford is gearing up for another dynamic year in the green transportation space by leading the industry with its comprehensive and pragmatic electrification strategy.

### GOING ELECTRIC

Ford's electrification strategy involves three types of electrified vehicles - Hybrid Electric Vehicles (HEV), Battery Electric Vehicles (BEV) and Plug-in Hybrid Electric Vehicles (PHEV). Hybrids have already become mainstream technology, though they remain a small part of the overall vehicle market. Pure electric and plug in electric vehicles represent a new, emerging market for automakers.

Over the next three years Ford will bring four new electrified vehicles to market including a pure battery powered Transit Connect Electric commercial van, Ford Focus electric passenger car, next generation lithium-ion battery powered hybrid and plug-in hybrid.

Broad commercialization of electric transportation is not something a car company can achieve on its own. Developing and producing the vehicles is just one part of the electric transportation equation. We are well on our way to delivering the vehicles, but for widespread adoption the infrastructure to support the technology needs to be in place and we need to ensure that the national electric grid can support increased electric demand.

An integral part of Ford's electrification strategy is collaborating with electric utilities across the U.S. to prepare for the day when plug-in vehicles, equipped with intelligent connectivity systems, can communicate seamlessly with the electric grid.

Ford's research with its partners focuses on four primary areas: battery technology, vehicle systems, customer usage and grid infrastructure.

Ford's key partners include:

- Electric Power Research Institute (EPRI)
- U.S. Department of Energy
- Southern California Edison
- New York Power Authority
- Consolidated Edison of New York
- American Electric Power of Columbus, Ohio
- Alabama Power of Birmingham, Alabama; and its parent, Atlanta-based Southern Company
- Progress Energy of Raleigh, N.C.
- DTE Energy of Detroit, MI
- National Grid of Waltham, MA
- Pepco Holdings
- New York State Energy and Research Development Authority.
- Hydro-Québec.

In August 2009, Ford unveiled a new vehicle-to-grid communication system that was first tested by one of its utility partners, American Electric Power of Columbus, Ohio, and now has expanded to additional partners. The system would allow drivers to program when to recharge their vehicle, for how long and at what utility rate. For example, a driver could program his/her vehicle to charge only during off-peak hours when electricity is cheaper, or when the grid is using renewable energy.

Specially-equipped plug-in hybrids, developed by Ford, can communicate directly with the electrical grid via smart meters provided by utility companies through wireless networking. The owner uses the vehicle's touch screen navigation interface and Ford Work Solutions in-dash computer to choose when the vehicle should recharge, for how long and at what utility rate. This technology is first being tested in the Ford Escape Plug-In Hybrid test vehicles now being operated by Ford's utility partners.

At Ford, we understand the development of such a system can only be accomplished through collaboration with utility companies, who must also work to ensure that the appropriate charging technology is in place and that the electric grid can support the increased demand once these vehicles hit the roads. Collaboration and shared learning are key to making the adoption of electric vehicles seamless and easy for consumers.

### ADVANCE BATTERY DEVELOPMENT

One of the biggest hurdles in the race to commercialize electrified vehicles is the need to produce affordable lithium-ion battery systems. Ford recently announced it would bring battery systems design and development in house and move production of battery packs for its next generation hybrids from Mexico to Michigan.

Battery system design and development will be a core competency for Ford in the 21st century. Building in-house expertise and leveraging our global scale is critical to developing electrified vehicles that are affordable, connected and fun to drive.

Ford's advanced battery researchers continue to work with battery suppliers, utility companies and top-tier academic researchers to develop, test and validate high-powered battery systems durable enough to last the lifetime of a vehicle.

### ELECTRIFICATION AS ONE PIECE OF THE PUZZLE

While electrified vehicles can be seen as one part of the overall drive toward more fuel efficient vehicles, it does not represent the sole solution. Ford has a comprehensive short, mid and long term strategy to deliver a full line up of advanced technology vehicles.

We continue to improve fuel efficiency and reduce CO2 emissions from our vehicles with a range of technologies from EcoBoost engines to hybrid systems. We believe consumers will choose which kind of propulsion systems and vehicles best meet their demands today and tomorrow and we're ready to help them make that choice.

Nancy Gioia is director of Global Electrification and was appointed to the newly-created position in October 2009 to head up strategy and planning for the next generation of Ford's global electric vehicle portfolio, touching all aspects of electrified transportation including product planning, supplier partnerships and collaboration with the energy industry and government.

Gioia received her bachelor's degree in electrical engineering from the University of Michigan and her master of sciences in manufacturing systems engineering from Stanford University. While studying with the assistance of a Ford Advanced Education Fellowship, she received the Outstanding Service Award from the Stanford Institute for Manufacturing and Automation. In July 2001, she received the All Star Award from *Automotive News* and in 2005 she was named one of *Automotive News*' "100 Leading Women in the Auto Industry."

## DEANGELIS-CREATING CONTINUED FROM PAGE 19

intervention in the processing of a received message is typically intended only for error conditions, for quality review, and for special situations." A resilient supply chain system would have to be built on a similar family of standards accepted by all stakeholders.

Absolutely critical for such a trusted system is the use of Attribute-Based Access Control (ABAC). Retailers and manufacturers that become part of a resilient supply chain rightfully expect that sensitive, proprietary information will be handled in such a way that only stakeholders that need various information receive it and only as much of it as required.

Only an ABAC system can provide this kind of granularity and still be scalable enough to support a large supply chain. The more information that such a system has the more intelligent and resilient it becomes.

### KEY TO ABAC'S SCALABILITY

A key to ABAC's scalability is that the issuers of credentials can be strangers whose authority is determined based on their own attributes, as documented in further credentials.

A key issue ABAC must address is the choice of an appropriate language design. The language is at the core of an ABAC system, and determines the kinds of judgments that can be issued in credentials.

Furthermore, its semantics determines how the judgments contained in credentials issued by distributed authorities combine to decide authorization questions. Another key issue is the data contained in credentials is often sensitive and must be protected. This is central, as it means the credentials that must be presented to obtain access are themselves subject to access control.

Implemented correctly a resilient supply chain takes into account local conditions. Walmart, for example, may be able to sell a six-month supply of laundry detergent to a consumer in the suburbs of Indianapolis; but a consumer living in the suburbs of Mumbai probably can only afford to buy enough detergent for a single load. Large retailers must be able. As consumer tastes change, or external events occur, a resilient supply chain is much better positioned to respond rapidly and flexibly. A resilient supply chain, fully implemented, would connect consumer data, to store data, to warehouse data, to transportation data, to manufacturing data, and to supplier data. This end-to-end system remains a vision; but technologies are emerging that in the coming years could make it reality.

## CONAGHAN-IMPACTS CONTINUED FROM PAGE 1

However, utilities' needs to upgrade infrastructure and generation reserves now stand to be affected by far more than state utility commission rate decisions.

Climate change is at the center of the American Clean Energy and Security Act of 2009, which is now before the Senate after having been passed by the House of Representatives and which contains greenhouse gas (GHG) reduction provisions and mechanisms.

Moreover, whatever Congress does, the Environmental Protection Agency (EPA) has already implemented a GHG reporting regime for utilities and many other heavy emitters, and EPA's recent finding that GHGs threaten public health and welfare is likely a prelude to even more regulatory action. Government mandates for meeting GHG reduction targets will surely require additional capital investment and the assumption of new technology and regulatory risk.

The key question becomes: how much of this risk must utilities assess and report to investors through public securities filings?

### SEC GUIDANCE

Expanded GHG emission reporting and compliance will have significant impact on any company.

For those that are publicly held, on February 12, 2010, the U.S. Securities and Exchange Commission (SEC) released interpretive guidance on the application of existing SEC disclosure requirements to climate change issues.

In her remarks, SEC Chairman Mary Schapiro clarified that the SEC's guidance is intended to ensure that existing disclosure rules are consistently applied by public companies in a manner that provides enhanced clarity to investors, and that the interpretive guidance is not an attempt by the SEC to weigh in on the existence or potential causes of global warming, or to amend well-defined SEC rules concerning public company reporting obligations or determinations of materiality.

The standard for determining the materiality of information (including climate-related matters) under the federal securities rules is whether there exists a substantial likelihood that a reasonable investor would consider the information important in deciding how to vote or make an investment decision.

This standard does not take into account subjective sensitivities that certain investors have to issues such as climate change.

With respect to contingent or speculative information or events (such as pending legislation), materiality depends at any given time upon a balancing of both the probability that the event will occur and

the anticipated magnitude of the event in light of the totality of the company activity.

The SEC's interpretative guidance highlight the following four areas as examples where climate change may trigger disclosure requirements in a company's risk factors, business description, legal proceedings, and management discussion and analysis:

### IMPACT OF LEGISLATION AND REGULATION.

With respect to existing federal, state and local laws which relate to greenhouse gas emissions, companies should disclose any material estimated capital expenditures for environmental control facilities as part of an assessment of whether any enacted climate change legislation or regulation is reasonably likely to have a material effect on the registrant's financial condition or results of operation.

The Release emphasizes that companies other than those in industries traditionally considered to be most at risk by "cap and trade" and greenhouse gas legislation (e.g., electricity, oil and gas, and heavy manufacturing) need to consider how they might be affected indirectly by potential legislation and regulation.

### INTERNATIONAL ACCORDS

Companies should consider, and disclose when material, the impact on their business of treaties or international accords relating to climate change, such as the Kyoto Protocol, the EU Emission Trading System (ETS) and other international activities in connection with climate change remediation.

### INDIRECT CONSEQUENCES OF REGULATION OR BUSINESS TRENDS

Legal, technological, political and scientific developments regarding climate change may create new opportunities or risks for companies, either by creating demand for new products and services or reducing demand for existing ones.

Companies should be prepared to assess and disclose the impact of both, whether it involves increased demand for "green" products and renewable energy output, or decreased demand for goods that produce significant GHGs.

### PHYSICAL IMPACTS OF CLIMATE CHANGE.

Climate change itself can have a material effect on a company's business and operations through impact on personnel, physical assets, supply chains and distribution chains.

This can include the impact of changes in weather patterns (such as increases in storm intensity, rising sea levels, and temperature extremes), changes in the availability or cost of natural resources, or increased insurance risk

from extreme weather.

Companies whose businesses may be vulnerable to such events should consider whether they constitute material risks and require disclosure.

### MANAGEMENT ASSESSMENT

Although the SEC Release was met with criticism from those who feel that the agency should not be inserting itself into a sensitive scientific and social debate, the release itself does not create any new disclosure requirements.

Instead, it merely reflects the SEC's position that the federal securities laws only require disclosure of information that is "material" to investors (all investors, that is, not just the socially minded) and that current disclosure requirements already provide a basis for disclosures related to climate change, to the extent the requisite materiality standards are met.

For most utilities, the materiality standard discussed previously will have its greatest impact in the Management Discussion & Analysis (MD&A) section of the Form 10-K annual report. There management must identify and disclose known trends, events, demands, commitments and uncertainties that are "reasonably likely" (a lower disclosure standard than "more likely than not") to have a material effect on the company's financial condition or operating performance.

If management determines reasonable likelihood, disclosure is required unless management determines that the occurrence would not have a material impact on financial condition or operations.

Here are two examples of real-world events related to climate change that could fall under the materiality standard, depending on utility management's evaluation:

### LITIGATION

Climate change is a subject ripe for litigation in ways that could directly impact electric utilities. Consider the reporting implications of a recent case that could have direct impact on utility operations.

In 2009, the US Court of Appeals for the Second Circuit, ruling in *Connecticut v. American Electric Power*, potentially opened the way for claims in tort for the abatement of greenhouse gas emissions as a public nuisance under Federal or State laws.

A lower court had considered GHG regulation to be a political issue for the executive and legislative branches, but the Second Circuit said GHG regulation has not advanced sufficiently to displace the federal common law of nuisance under which pollutants can be regulated.

The fact that a major electric utility was the defendant in the lawsuit is all the more reason to ask whether the court decision poses a material risk.

### TAXATION

In February 2010, President Obama released his proposal for the 2011 federal budget. It proposes to phase out subsidies for fossil fuels that are provided under the Internal Revenue Code, and a number of tax preferences available for coal activities are proposed for repeal in the budget, which would have a direct impact on any electric utility.

These include the expensing of exploration and development costs, the percentage depletion for hard mineral fossil fuels, and the ability to claim the domestic manufacturing deduction against income derived from the production of coal and other hard mineral fossil fuels.

At the same time the budget proposal more than doubles the 2009 cap on the aggregate amount of tax credits made available in the American Recovery and Reinvestment Act for qualifying renewable energy projects – a definite plus for cogeneration and other renewable energy producers. Is one tax provision a material risk and the other a material advantage?

The question is there for each utility to decide.

### CAREFUL CONSIDERATION

Clearly, whatever risk factor disclosure is made, should state the risk and specify how the particular risk affects each specific company (rather than boilerplate disclosures applicable to all companies). Given this caveat, some commentators have suggested that the new SEC guidance is a signal that the SEC intends to scrutinize compliance with existing disclosure rules, and that the Release will serve as the basis for SEC comments issued to companies questioning the adequacy of companies' climate-related disclosures in their SEC filings.

If that is the case, particularly legislation, regulation and court decisions continue to advance GHG regulation, public utilities are well advised to carefully consider these matters and update their disclosures to reduce the likelihood of receiving such a comment from the SEC.

Thomas P. Conaghan is a partner in the Washington, DC office of global law firm McDermott Will & Emery and is based in the Firm's Washington, D.C., office. He represents both publicly held and closely held businesses in a wide range of securities law matters.

## TORYS'-TRENDS

CONTINUED FROM PAGE 18

### BIOPHARMA M&A IN 2010

As blockbuster drugs began to come off patent, big pharmas – fearing loss of revenue share – rushed to couple with their counterparts in 2009. The big pharmas are hungrily looking for additional products and innovation to fill their sagging pipelines and in 2010, they will refocus and continue to look to small and mid-sized biotech companies for licence, partnership and acquisition transactions.

The liquidity crunch in the venture capital community and capital markets has created an environment in which small and mid-sized biotech companies need to consider a pharma deal earlier than they may ideally desire. In addition, although licensing deals have traditionally been pharmas' preferred route of engaging with early-stage biotech companies, depressed valuations of public biotech companies are making acquisitions more attractive and, ironically, even cheaper than licensing deals. At the same time, the licensing deals continue to be increasingly complex financial deals, which are precursors to follow-up acquisition.

Mergers and acquisitions will continue to be strong in 2010 since pharmas' needs are unquenchable. The Canadian biotech public markets are still in slumber mode, but we see signs of movement. Another factor will be whether the competition for biotech deals among pharmas will increase or decrease with fewer players in the market.

Medical device mergers will also continue at a healthy pace, although the acquirors will be more deliberate and the valuations more rational than in the past.

### FOREIGN INVESTMENT IN CANADA

Recent changes to the Investment Canada Act allow the Canadian government to review foreign investments on national security grounds, regardless of the size of the target or of the investment. Accordingly, foreign buyers potentially face a new hurdle when investing in Canada.

"National security" is not defined, but we believe that an appropriate starting point will be whether the Canadian business has strategic or military importance. And although there is limited experience with the new process, we can identify three emerging trends, each of which tends to limit the scope of a possible review of foreign investment on national security grounds:

- Investments in natural resources will not generally trigger national security reviews. However, transactions involving the acquisition of strategic natural resources, such as uranium, may well trigger a review.
- "National security" is not intended to encompass "national interest."
- Enforcement staff will not presume that an investment by a state-owned enterprise or sovereign wealth fund will give rise to national security issues.

### ARE WE THERE YET?

Canada's new merger review regime, enacted in March 2009, allows the Commissioner of Competition to "stop the clock" during her review of a merger by issuing a supplemental information request (SIR) before the expiry of an initial 30-day pre-merger waiting period. Since the issuance of an SIR extends the waiting period until 30 days after the parties have complied with its terms, the Commissioner is not under the same pressure to limit the scope of SIRs that

she was with production orders under the prior regime.

In recent public statements, the Commissioner has attempted to assure the business community that the application of Canada's new review process will not mirror the much-criticized U.S. process on which it is based, and that she will be more "surgical" than her American counterparts in targeting document production. Nevertheless, parties to complex mergers should expect to receive broader and more demanding document production orders, which will affect review tim-

ing and increase compliance costs. This is a trend we have already begun to see.

The SIR process also provides the Commissioner with much more control over the timing of the review process than was previously the case.

In these circumstances, antitrust considerations take on greater strategic significance – particularly in complex cases in which timing is an issue – and reinforce the need to involve experienced antitrust counsel in the early stages of merger planning.

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#### About the Next Generation Scholarship Fund:

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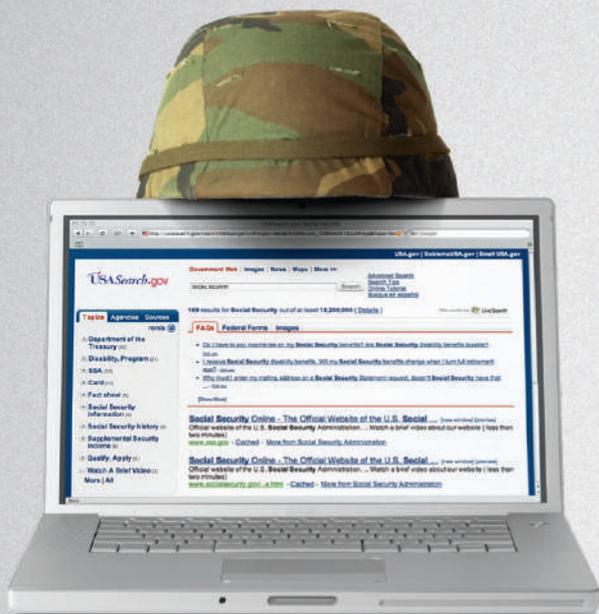
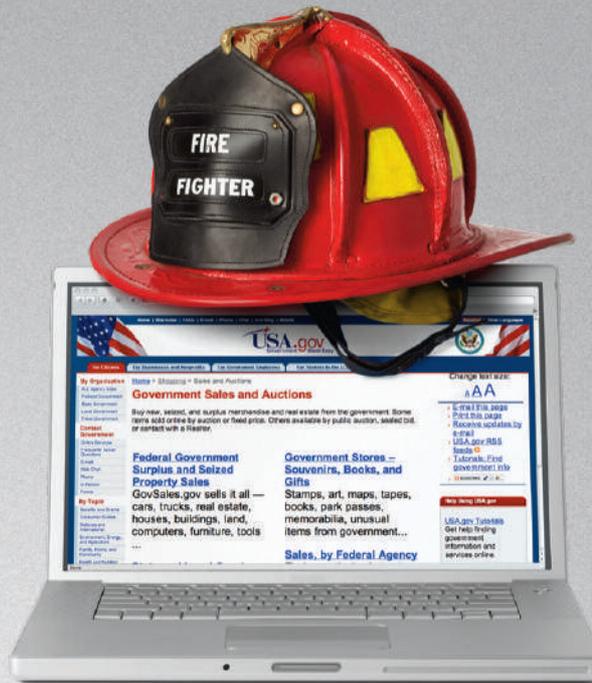
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