



**Official Press Pack for  
World Future Energy Summit 2009**

## **ABB makes World Future Energy Summit 2009 debut to showcase energy-efficient solutions**

*ABB to exhibit the latest in carbon management, solar power and more.*

**Abu Dhabi, U.A.E, January 19, 2009** – ABB, the leading power and automation technology group, will make its first-ever appearance at the World Future Energy Summit in Abu Dhabi (from January 19-21) in a bid to share its expertise with customers and industry professionals about its innovative renewable energy solutions.

At its high-tech exhibition stand (stand no. 9120, hall 9), ABB will showcase its technologies in four key areas: solar and wind generation, long- distance power transmission, green buildings and carbon management.

More than 15,000 attendees, including top government officials, heads of global organizations, leading environmentalists and international investors from over 40 countries, are expected to attend this year's WFES event to discuss the future of renewable energy, and ABB will be a key player in this debate.

On January 19, Gunnar Asplund, from ABB's Research and Development Systems, will join the Green Energy Showcase at 4:00pm to reveal how ABB's pioneering HVDC (High Voltage Direct Current) technology can enable the development of renewable technology.

Additionally, top ABB experts will be present on its stand during the three-day summit to share their expertise on a wide array of topics, including carbon capture, HVDC Light, ABB's i-bus KNX intelligent installation system, as well as solar and wind power.

Frank Duggan, ABB's MEA region manager, who will also be present at the event, is excited about ABB's debut at the summit, and reckons ABB's innovative technologies will make a big impression on visitors.

“The world is currently facing major energy challenges and increasing concerns associated with climate change. This makes our presence at the World Future Energy Summit more important than ever, as our technologies are at the forefront in assisting stakeholders in overcoming these challenges and mitigating their effects. For example, ABB's HVDC Light technology simultaneously tackles the energy supply, efficiency and sustainability issues associated with offshore oil and gas production, which is a key industry in the region,” says Duggan.

“More importantly, ABB's recent Arabia Corporate Social Responsibility Award win highlights our commitment to offering sustainable products and solutions to the Middle East market, whilst lowering the environmental impact of our customers,” concluded Duggan.

ABB's stand will also feature a number of intriguing exhibits, including the firm's solar tracker and the NorNed bi-pole cable - the world's longest submarine cable at 580 km route length. A model of ABB's well-known North Sea HVDC project will also be on display; the project reduced CO<sub>2</sub> emissions by nearly 1.5 million tons per year by replacing fossil-fuel generation.

Another key display will be the firm's carbon capture plate called the 'Fourier Transform Spectrometer', which collects and transmits global CO<sub>2</sub> and methane densities (up to 30 times daily) from an impressive 650 km above the earth.

To help visitors find out more about its activities, ABB has created an information-packed microsite for the WFES 2009, available at [www.abb.com/mena](http://www.abb.com/mena).

ABB's microsite features in-depth information about ABB's energy-efficient technologies, a special 'Meet with ABB' form for journalists, customers and channel partners, and a 'Press Room' corner, featuring the latest press releases, interviews and key publications ABB will be featured in during the summit.

The new microsite also features a wind power game called 'Blackout', developed specifically for ABB. In the game you're responsible for designing wind turbines best suited for different locations - without wasting money. You either light-up the city of Metropolis or plunge its residents into darkness.

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 120,000 people.

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## **ABB solution taps the sun's energy**

### ***ABB technologies to expand output and extend life-span of Forsmark nuclear plant***

**Abu Dhabi, U.A.E, January 19, 2009** – ABB, the leading power and automation technology group, is supplying a comprehensive power and automation solution for one of the world's largest solar thermal power plants – a solution that includes uniquely accurate control equipment to enable the 1,248 parabolic troughs to capture maximum energy from the sun.

The solution encompasses an extensive array of power and automation products and systems for the 100-megawatt (MW) Extresol 1 and 2 solar thermal power plant and solar collector field in Extremadura, western Spain.

Extresol 1 and 2 will each produce 50 MW of electricity from a vast solar field of parabolic trough collectors covering more than 510,000 square meters, equivalent in size to around 70 soccer fields.

### **Clean power for 60,000 homes**

Together, both power plants will generate enough electricity to provide 60,000 Spanish homes with clean energy and avoid 298,000 metric tons of CO<sub>2</sub> emissions a year. Extresol 1 is scheduled to start operation at the end of 2009 and Extresol 2 six months later.

Along with the 100-MW Andasol 1 and 2 solar thermal power project in neighboring Andalusia – for which ABB has also supplied an extensive power and automation solution – Extresol is one of the largest solar energy projects in the world. Both projects are jointly owned by Sener and Cobra, two Spanish engineering and construction companies.

ABB's comprehensive scope of supply to Extresol includes control systems for the power plant and parabolic trough collectors, instrumentation, motors, drives and low voltage products, as well as substation power equipment for delivering the energy safely and reliably to the national power grid.

### **Advanced positioning**

The solution also includes AC500 programmable logic controllers equipped with an advanced solar positioning algorithm especially developed by ABB for parabolic trough collectors and solar trackers. The algorithm enables the collectors to follow the passage of the sun to within 0.03 degrees of error, thereby absorbing the maximum amount of energy at all times.

Each of the 1,248 collectors is equipped with an AC500 PLC. Besides their outstanding accuracy, the PLCs are certified to withstand the demanding operating conditions of extreme heat during the day and low temperatures at night.

## **High-efficiency power generation**

Parabolic trough collectors are the most efficient and widely used method for large-scale solar thermal power generation. The collectors are parabolic mirrors that reflect and concentrate the sunlight onto tubes containing heat transfer fluid. The fluid is then used to heat steam in a turbine to generate electric power.

ABB has played a leading role in the development of solar concentration and parabolic trough technology since the 1990s when it developed a distributed control system for the world's first test facility on behalf of the International Energy Agency at the Plataforma Solar de Almería (PSA) in Spain. The PSA is Europe's leading test facility for solar concentration technologies.

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## **ABB delivers longest underwater power link**

*Project supports creation of common European power market*

**Abu Dhabi, U.A.E, January 19, 2009** – ABB, the leading power and automation technology group, helped TenneT and Statnett, the Dutch and Norwegian transmission system operators, officially open a 580-kilometer power link between the two countries.

The project brings the goal of a common power network and a reliable, efficient electricity supply for Europe a step closer to reality. TenneT and Statnett jointly own the transmission link for which ABB supplied the key technologies.

NorNed is the longest submarine cable link in the world and the most powerful, with a transmission capacity of 700 megawatts. It was inaugurated in the presence of executives from the two utilities that own the link and ABB, as well as the Norwegian minister of petroleum and energy, Terje Riis-Johansen, and the Dutch economics minister, Maria van der Hoeven.

“NorNed is a landmark feat of engineering that brings Europe even closer to the goal of creating a reliable, continent-wide electrical network with low environmental impact,” said Peter Leupp, head of ABB’s Power Systems division. “It is a significant contribution to the quality and reliability of Europe’s power supply.”

NorNed is the first direct power link between Norway and the Netherlands, and is part of the European Union's plan to improve cross-border power infrastructure, reduce blackouts and help create more efficient power markets within Europe.

The ABB-built link using high-voltage direct current (HVDC) technology allows the utilities TenneT in the Netherlands and Statnett in Norway to trade power and increase the reliability of electrical supply in each country. The Dutch grid can use Norwegian hydropower to manage peak power loads during the day and, by offering an alternative to fossil fuel-based generation, grid operators expect to reduce CO2 emissions by about 1.7 million tons per year. ABB pioneered HVDC technology 50 years ago and has supplied more than half the world’s HVDC converter stations.

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## **ABB wins \$45-million order for Swedish power plant upgrade**

### ***ABB technologies to expand output and extend life-span of Forsmark nuclear plant***

**Abu Dhabi, U.A.E, January 20, 2009** – ABB, the leading power and automation technology group, has won an order worth \$45 million to provide engineering expertise and supply power products for a project to expand the output and life-span of a nuclear power plant owned by Swedish utility Vattenfall. The order was booked in the fourth quarter of 2008.

ABB's center of competence for nuclear power plant projects, which is based in Sweden, will execute the project involving electrical system studies, design, engineering, installation and commissioning. ABB will provide the electrical package needed to increase gross output from 1,200 megawatts (MW) to 1,360 MW at Unit 3 of the Forsmark nuclear power plant, a project due to be completed by 2014.

“Our engineering competence and high-reliability products will play a key role in the project by meeting the stringent quality requirements of such plants,” said Peter Leupp, head of ABB's Power Systems division. “The high efficiency generator step-up transformers will also result in significant energy savings.”

ABB will also supply a range of power products including three generator step-up transformers, two auxiliary transformers and an excitation transformer.

Vattenfall is Europe's fifth largest electricity generator, and its Forsmark power plant in Sweden accounts for one-sixth of all kilowatt-hours of electricity used in the country. Forsmark is its most recent nuclear power plant and accounts for a total power output of around 3,200 megawatts.

ABB has a vast installed base of power generation products and systems around the world, and offers an extensive range of products, systems and services to the sector, including hydro, nuclear, thermal, wind, solar and desalination plants.

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## **ABB U.A.E wins prestigious Arabia Corporate Social Responsibility (CSR) Award**

*ABB receives award for 14 years of local CSR initiatives and programs*

**Abu Dhabi, U.A.E, January 21, 2008** – The U.A.E arm of ABB, the leading power and automation technology group, has scooped the inaugural Arabia Corporate Social Responsibility Award.

At an exclusive gala dinner, held at the Burj Al Arab held a few months ago, ABB won the coveted award in the hugely competitive ‘Large Company’ category.

Gary Foote, ABB regional head of occupational, health and safety and sustainability affairs, was thrilled at the news and attributed the award to ABB U.A.E’s long-term commitment to CSR in the Middle East region.

In his acceptance speech, Foote revealed, “We are extremely proud to have won this award tonight. Over the last 14 years, ABB U.A.E has integrated corporate social responsibility into our everyday business to contribute to sustainable economic development. We’ve been able to offer innovative products and solutions to the market, whilst lowering the environmental impact of our customers. We also work closely with our employees, the local community and society at large to improve the quality of life for people and the environment around us.”

The goal of the Arabia Corporate Social Responsibility Award, instituted by the Emirates Environmental Group (EEG) under the patronage of His Highness Sheikh Hamdan Bin Mohammad bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of Dubai Executive Council, is to honor companies in the GCC and the wider Arab region that demonstrate a clear vision, strategy and implementation of CSR.

The award is also supported by the United Nations Global Compact - the largest and one of the most influential voluntary corporate citizenship networks in the world.

Amongst the night’s winners, ABB was the only international company to take home the coveted award.

Foote commented, “I think the award highlights the fact that even though ABB is an international company, we have really immersed ourselves into the local environment through our campaigns and programs since 1994. We sincerely hope this award and ABB’s programs encourage all companies – both big and small – to work towards creating and implementing a long-term CSR program for a better world.”

In the U.A.E, ABB supports the government’s green building initiative in Dubai to cut water and energy use and also supplies automation control technology for homes to reduce power consumption and emissions. ABB has also launched a number of initiatives supporting the professional development of women in the country.

Meanwhile, in Saudi Arabia ABB offer students in the country a higher education scholarship program, and in Jordan ABB volunteers with INJAZ, which aims to inspire and teach Jordanian youth job skills to enhance their opportunities to join the job market.

In Egypt, ABB organizes a number of social events such as special ‘Community Days’ and blood donation drives. ABB also supports ‘The Hope Village for Orphans Care’ orphanage in 10th of Ramadan City through the donation of school supplies and clothes. Additionally, ABB Egypt is an active member of the UN Global Compact program.

In South Africa, ABB has designed a ‘Youth-in-Energy’ campaign to increase energy awareness and environmental responsibility in the country. ABB has also designed and implemented an internal energy program to reduce energy consumption in daily operations to lower its carbon footprint.

ABB U.A.E is one of the founding members of the Green Building Council, World Wildlife Fund (WWF), CSR Network, Emirates Environmental Group and the GCC Global Compact. ABB also supports a number of local colleges in the country through work-placement programs and a special ABB award presented to exceptional engineering students.

For its employees, comprising of 22 diverse nationalities, ABB provides long service awards, a Middle East pension plan scheme, annual ‘Family Day’ events and more. The company also engages staff in environmental programs such as the ‘Clean up the U.A.E’ campaign.

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**ABB's Vice President, Business Development - MEA region, Jim E Kelly, from ABB U.A.E sits down with *Turret Middle East* to talk about the firm's technologies and how they can contribute to energy efficiency. (This interview may be printed by third parties.)**

**What is ABB's main business?**

**ABB:** ABB is a leading power and automation technology firm with over 110,000 employees serving industrial and utility customers. Our main goal is to help our customers to use electrical power efficiently, increase industrial productivity and to lower environmental impact in a sustainable way.

**How can ABB technologies positively impact the sustainability and energy efficiency concerns of all stakeholders?**

**ABB:** The world is facing serious energy challenges and increasing concerns associated with climate change. ABB technologies are at the forefront in assisting stakeholders in overcoming these challenges and mitigating their effects. For example, ABB's HVDC Light technology simultaneously tackles the energy supply, efficiency and sustainability issues associated with offshore oil & gas production. Powering oil & gas production platforms with higher efficiency power from shore using HVDC Light eliminates lower efficiency gas turbines on the platform itself resulting in lower greenhouse gas emissions and more reliable power delivery to operations. This technology is installed at StatoilHydro's Troll A gas platform in the North Sea where ABB provided a 70-kilometer underwater power link to deliver electricity from the mainland grid. This solution removed the hazard of local power generation on the rig, saved space and provided access to a reliable supply of emission-free power from Norway's hydroelectric plants. By providing a high-efficiency transmission link using ABB's HVDC Light technology, and high-efficiency motors to drive gas delivery equipment, ABB helped Statoil to cut CO2 emissions by 130,000 tons per year.

**How can the UAE increase energy efficiency and accelerate economic growth in a sustainable way?**

**ABB:** The U.A.E's rapid economic, population growth and increasing industrialization present opportunities for enhanced adoption of sustainable technologies.

ABB believes that energy efficiency is the 'other alternative fuel' that can quickly reduce energy consumption and environmental impact. For example, if we consider the rapid expansion and increased tonnage handling of ports in the UAE, opportunities exist to reduce the carbon footprint of these facilities by supplying high-voltage power connections that provide grid electricity to vessels while berthed. This technology allows ships to shut down their own, less efficient generators, which would otherwise produce emissions in the port facility.

Carbon Capture & Sequestration (CCS) is another technology that is gaining increased interest around the globe as a means to reduce the climate effects associated with anthropogenic carbon dioxide emissions.

As part of this global push, the Masdar initiative has highlighted CCS as a key technology for the UAE in developing Clean Development Mechanism projects to reduce CO2 emissions. ABB feels this technology has a significant role to play in the overall mitigation of climate change, and we have been intimately involved with our automation and power technologies enabling success of the few commercial scale CCS projects currently operating in the world today. The monitoring of sequestered CO2 is also a key area of focus in CCS projects and ABB is uniquely positioned to contribute technology that can remotely sense CO2 from airborne sensors.

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## How to cut CO<sub>2</sub> emissions

Did you know that the United Arab Emirates' energy consumption per capita is one of the highest worldwide?

Did you know that the CO<sub>2</sub> emissions produced by a car travelling from Dubai to Abu Dhabi 300 times can be absorbed by one acre of forest over the course of a year?

Almost everything we do generates carbon dioxide and other greenhouse gases. The latest scientific research has shown that our planet is changing and that human activity is responsible. At ABB, we take these concerns seriously and are constantly looking for ways to use power more efficiently - whether in electrical generation, transmission, manufacturing processes, construction, or homes and offices.

Right in your own everyday life, you have the power to reduce your consumption of resources and energy and produce less CO<sub>2</sub>. Here's how:

### How to reduce CO<sub>2</sub> at home:

- Use fans; keep windows and doors shut and close shades during the hot season.
- Close drapes and shades to help retain heat at night or during unoccupied periods.
- Turn off unnecessary lighting and use task or desktop lamps with compact fluorescent light bulbs (CFLs) instead of overhead lights. Use natural daylight wherever possible.
- Replace standard incandescent light bulbs with compact fluorescent light bulbs (CFLs) to save 75% of lower energy consumption.
- Unplug electrical items such as mobile phone chargers and other electronics when not in use. These small items can use as much power as your refrigerator!
- Use timers or motion detectors on lamps that are used for security lighting, such as the ABB i-bus® KNX intelligent installation systems.
- Take steps to cut water use such as installing faucet aerators, low-flow showerheads, and low-flush toilets.
- When possible, wash clothes in cold water. About 90% of the energy used in a clothes washer goes to water heating.

### How to reduce CO<sub>2</sub> in the office:

- Turn off your computer and monitor when not in use.
- Do not leave equipment in sleep mode overnight because it will continue to draw a small amount of power. Turn off all equipment every night - especially monitors and printers. Monitors usually consume twice the electricity as the CPU in your computer.
- Enable "power management" on all computers and make sure to turn them off at night. A laptop computer uses up to 90% less energy than bigger desktop models.

### How to reduce CO<sub>2</sub> on the road:

- Think before you drive to reduce CO<sub>2</sub> emissions.
- Carpool with co-workers or friends to prevent pollution
- Drive sensibly. Aggressive driving (speeding and braking) wastes petrol.