

How can we advance the entire energy system?

Real Smart Grid solutions from Siemens get you closer to the future of energy right now.

Turning the entire energy conversion chain into a proactive structure and establishing intelligent, interactive Smart Grids is the key to solving the energy challenge we all have to face. Siemens, a worldwide leader in the field of Smart Grid technology, makes possible the vertical and horizontal integration of all elements within a Smart Grid and beyond. Even better, all these products, systems, and solutions are readily available. www.siemens.com/energy

Answers for energy.

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Dear Reader,

Driven by climate change, the demand for clean energy solutions that help protect the environment is steadily growing. Current efforts to limit warming are based on expectations that the global community will seriously begin working for a sustainable future. The recently ended COP 16 Summit in Cancún marked the next step toward a new international environmental treaty. And there are further encouraging signs. Many governments are prioritizing clean energy by providing more economic recovery funding, devoting over US\$184 billion of public stimulus investments for this purpose.* In addition, framework goals have been set, like the European Union's 20-20-20 target for 2020, the German government's new energy concept, or Chinese plans to reduce carbon emissions by around 40 percent for every GDP point by 2020. Creating a sustainable, economical, and reliable energy supply is now one of the most urgent issues of our time. To achieve these goals, we need to

become cleaner, more efficient, and more sustainable in power generation, transmission and distribution to keep our planet a place worth living on. That's why renewables, optimized power generation, efficient transmission and distribution grids and smart consumption are now driving our energy business. Siemens is dedicated to helping economies throughout the world achieve clean energy, and provides innovative products and solutions to improve both our own ecobalance and that of our customers and suppliers. In this issue, renowned experts and journalists focus on clean energy from various perspectives. The cover story starts off by featuring RWE's Chief Commercial Officer, Leonhard Birnbaum, discussing the trade-off between investments and results in clean energy technology. Maximum carbon abatement, however, depends on new technologies. Experts offer insight into some "green" highlights such as marine current turbines for



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energy production. But renewables alone can't satisfy the world's soaring energy demands. Fossil power will still be needed, making integrated gasification combined-cycle technology as well as combined heat and power plants (cogeneration plants) especially interesting for reducing greenhouse gas emissions. But even if a country is blessed with abundant natural resources, energy policies and economic needs can lead to a carbon policy crunch due to divergent policy paths. Read more about this in our essay on Australia's energy policy. I wish you an informative and revealing glimpse of clean energy in this issue and hope you enjoy exploring what lies ahead for our business.

With best regards,

* The Pew Charitable Trusts: *Who's Winning the Clean Energy Race? G-20 Clean Energy Factbook*, Washington 2010.