

What if 'better than ever before' is only the beginning?



When your area of expertise is the entire energy conversion chain, innovation is an ongoing process.

At Siemens, innovation is never an end in itself. It is rather the driving force that makes us come up with products, solutions, and services that are trendsetting in terms of efficiency, cost-effectiveness, and environmental compatibility. And there is always something more to achieve. Our "all-electric oil and gas" approach, for example, increases the efficiency in oil and gas processes. And our innovative control equipment is a catalyst for highly efficient, more fault-tolerant, and self-healing' Smart Grids. www.siemens.com/energy

Answers for energy.

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Dear Reader,

The energy economy is going through a period of transformation, triggered by ever-scarcer natural resources, climate change and the soaring demand for energy. Driven by technological innovations, visionary large-scale projects and changing framework conditions, we are well on the way into a New Electricity Age. Electricity is the most flexible and efficient source of energy and can directly tap the enormous potential of renewable sources. To ensure secure, clean and economical energy supplies in the future, most applications must be and will be electrical – such as mobility.

The basis for these energy supplies will be energy mixes tailored to each region and increased energy efficiency along the entire energy conversion chain. These two themes were the focus of the first two issues of *Living Energy*.

The third key factor for securing sustainable energy supplies is an intelligent grid infrastructure. In the future,

smart grids will actively manage the flow of electricity in power networks. Consumption will follow generation rather than vice-versa, as is now the case. If less power is available from renewable sources at certain times of the day, consumption can be reduced through flexible tariffs and modern bidirectional communication systems, and shifted to a more favorable time. And the behavior of consumers themselves will fundamentally change: Rather than be exclusive power consumers, they will turn into occasional power producers who can feed back temporarily stored power into the grid and actively trade their own produced power on the free energy market. "Intelligent energy" is one of the central challenges for the future that we must tackle together with you, our customers. This issue of *Living Energy* is thus dedicated to the New Electricity Age – and offers an overview of future-oriented technologies. Renowned experts and journalists take a closer



Wolfgang Dehen,
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look at innovations in the fields of wind energy and electromobility, and at new solutions in the field of fossil power generation.

This transformation process in the energy economy is gathering momentum, particularly in emerging countries. These countries will play a major role in shaping the New Electricity Age, since their energy needs are growing especially fast. Read more about the status quo and the future of energy systems and energy policies in India in the article of Anil Razdan, the former Secretary of Power in India.

I wish you an informative and revealing glimpse of the New Electricity Age in this issue and hope you enjoy exploring what lies ahead.

With best regards,