

Energy and resources



Peter Terwiesch
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Dear Reader,

Regular readers of *ABB Review* will have observed that major visual changes were implemented with issue 1 of this year. Beyond appearance, we are continuously seeking to fine-tune content to your needs and expectations and would like to reach out to you for your inputs through a brief survey (only 10 questions) on www.abb.com/abbreview. Please take part – your opinion is valuable to us, and you will have the opportunity to win one of several small prizes.

The present issue of the journal is dedicated to energy and resources. Not only is the world's population continuously rising, but so are overall standards of living. Especially in developing countries, more and more people are moving towards greater prosperity – and with it to more energy and resource-intensive lifestyles. As much as these improvements are to be welcomed, they also increase the pressures related to the finite availability of many resources. A broad range of resources, ranging from water to energy and basic minerals, is becoming scarce. Fundamentally, such scarcity can be addressed both by tapping new sources as well as through efficiency, ie, achieving more with less. The process of transforming raw materials to finished products or services involves many individual steps, all normally associated with cost, waste, and losses. Increasing efficiency and reducing waste in every one of those steps (and if only by a relatively small amount) yields significant savings. It allows companies and individuals to be more competitive and to reduce their environmental footprint – and permits the same resources to serve more people without requiring them to scale back their lifestyles.

An important aspect of optimizing any process is to control it better, permitting waste to be minimized and overall performance maximized. This journal looks at the potential for ABB's System 800xA industrial automation system. Another, complementary, technology that can unlock huge potential, both in terms of energy and improved controllability, is variable-speed drives.

Past articles in this journal have discussed their short monetary payback period. This issue looks at their broader environmental payback and shows that this is equally impressive.

While on the topic of drives, we also look at some more unusual applications. For example, moving the mighty roof panels of a large sports stadium, and thus providing an energy-efficient and flexible way of adapting the structure to different weather conditions and purposes.

Helping customers to improve operations to reduce their environmental footprint is just one part of the equation. As a manufacturing company, ABB is itself a large consumer of materials and energy. The company's new building at Longmeadow in South Africa integrates many sophisticated measures to save resources, and uses some of the company's own products in achieving this. And this is not a one-off project: In terms of energy consumption, ABB has set the goal of cutting this by 2.5 percent per employee annually.

As for the development of alternative sources, ABB's technologies are often an enabler for renewable power generation – in this issue as an equipment supplier for the Alpha Ventus wind park, including the generators and converters of the largest wind turbines to be installed in the world so far.

I trust this issue of *ABB Review* will provide fresh insights into solutions that help reduce our environmental footprint.

Enjoy your reading

A handwritten signature in blue ink that reads "Peter Terwiesch". The signature is fluid and cursive, with a long horizontal stroke at the end.

Peter Terwiesch
Chief Technology Officer
ABB Ltd.

