

Oil and gas



Peter Terwiesch
Chief Technology Officer
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Dear Reader,

Oil and gas account for well over half of mankind's primary energy consumption. One of the factors that makes oil so valuable is its extreme versatility, both as a source of energy and as a raw material. The ease with which it can be transported and stored permits it to be used as a source of energy virtually everywhere. More than just a commodity among many, oil is arguably the leading global commodity of our age. Its price is scrutinized and commented more than any other. Whether we are looking at projections of global economic trends, or just filling our car at the pump, we cannot escape the price of oil.

Natural gas is not a global physical commodity in the same manner as oil, but technologies such as pipelines and LNG tankers are increasingly facilitating its trading over longer distances.

Maintaining the dependability and reliability of this supply is thus a fundamental objective. This translates into a technological challenge, ie, that of enabling the exploration, extraction, processing and transportation of oil and gas in manners that are safe, clean, energy efficient and affordable; and this despite the ever-increasing geographical and geological challenges of the locations from which they are being extracted.

In an interview with Texas state geologist, Professor Scott Tinker, *ABB Review* takes a more detailed look at some of the challenges and trends faced by the oil and gas industry. The subsequent articles provide examples of ABB technology at work for the industry. Through examples from across the world,

we look at ABB's offering as engineering, procurement and construction (EPC) provider, integrated control systems, trends in electrical houses, the separation of oil and water, large adjustable speed drives, getting more information out of process data, and the use of robots in harsh environments.

Beyond the scope of oil and gas, further articles in this journal look at ABB's contribution to Sweden's Aitik copper mine, efficiency in drives, the aerodynamic performance of surge arresters on the roofs of high speed trains, and retrofitting a substation with the IEC 61850 standard for substation communication.

I trust that this issue of *ABB Review* will cast a spotlight on some of the facets involved in assuring the continuity of the energy supply that is so important to our economy.

On a different note, after six years as Chief Technology Officer of the ABB Group, I will shortly be taking up a new role as regional manager for Central Europe and head of ABB Germany. This is therefore the last issue of *ABB Review* to be published with myself on the Editorial Board. I would like to thank all authors and readers for their keen interest in and support of this journal over the years, and trust that this will continue in the future.

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.

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Chief Technology Officer
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