

Energy storage can be the link that completes the energy sector's logistic chain. If energy can be stored efficiently, it will greatly enhance the scope for realizing a sustainable and reliable energy supply. Convinced of this potential, Jillis Raadschelders supports our clients around the world with a virtual team of experts.

Text **Marjolein Roggen** Photography **Fotostudio Alain Baars**

# “We live and breathe

Ten years ago, Raadschelders could hardly have dreamt that his specialist field would take on such a prominent role within the sector. Back then, he was working with lead-acid batteries for use in hybrid vehicles. Over the last decade, however, a whole series of new applications have emerged for energy storage. These range from fuel cell-battery combinations, portable systems, accident analysis, GSM and laptops, to lithium-metal batteries, energy storage in and around the home, asset optimization and the dimensioning and control of generator sets linked to wind and solar energy converters. The diversity of Raadschelders' activities matches the current breadth of the energy storage discipline.

**Interest in energy storage is growing all around the world. It's now very much in the thoughts of government, industry and the media. How do you explain that?**

“Storage is an integral part of every logistic chain... except in the electricity sector. For a long time, people have simply accepted that. However, it is becoming a technically and economically untenable situation. By using energy storage, you can separate the generation of energy from its use – both in time and in space – without sacrificing quality at any level. Storage serves as a logistic buffer, enabling people to resolve their problems locally.”

**What interesting possibilities does energy storage offer?**

“It's important not to make the mistake of thinking of energy storage as a product. It is a functionality... an enabling technology, which makes more things possible. At the transmission

level, storage has a role in balancing the large-scale inflow of energy from wind farms, reducing the need for control and reserve capacity. In the distribution network, storage can prevent transformer overloads, serve as a peak shaving tool and enhance power quality. Where industry is concerned, it can provide a basis for tariff optimization through the shaving of demand peaks, and can provide local solutions to voltage distortion problems. For neighborhoods and individual households, energy storage can mean greater self-sufficiency. Above all, energy storage systems are flexible. They are not stranded assets, like cables. You can take them somewhere, connect them up, use them a while, disconnect them and move them somewhere else.”

**You joined KEMA three years ago. What are your goals?**

“I joined KEMA to strengthen and streamline the company's expertise in the field of energy storage. What sets KEMA apart is that we are globally active along the entire energy storage value chain: from the testing of the little batteries used in consumer electronics, right up to the testing of megawatt batteries ... and from the development and demonstration of small-scale and large-scale storage systems to the provision of advice on the economic, technical and legal implications of application in the energy and transport sectors. There are all sorts of questions we want to answer. What systems are required? What technology can be used for such systems? What is the score where safety and performance are concerned? What computer models are needed? And, most important of all: how can you secure a financial return on the application of technology? After all, technology has to follow the market.”

# energy storage”



“Energy storage isn’t a product. It is a functionality, which makes more things possible”

**What trends do you discern, and what do they imply for KEMA’s services?**

“The technology is currently developing very quickly and there are new players entering the market all the time. That inevitably means risk for all concerned. The utilities hold the key. They can see the changes; they are responsible for ensuring a secure power supply. Our market and regulatory insight, combined with expertise in the fields of technology, testing and certification mean that we have a lot to offer our clients. Increasingly, we play the role of a service partner with a long-term outlook. Economics, regulation, technology, safety: everything has to be considered together.

With a view to providing our clients with the best possible service, we work with a globally dispersed team of people, every one of whom knows his or her specialist field inside out. Together, we can help our clients to manage the entire logistic chain. We live and breathe energy storage.” <<

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