Figures Behind a Turning Point

Dear Reader,

Many figures give a whole new impression when seen in the right context. At least that is what I found recently when an advisory board member of MTZ sent the brief summary findings of a study performed by the Physics Institute of the University of Heidelberg concerning renewable energy in Germany. The term “Energiewende” (“energy transition”) – even not translated – has already found its way into other languages. This pioneering undertaking has attracted global attention to our policy and not just since the most recent Climate Summit in Paris, where the need for action on the part of all nations was recognised and agreed.

That said, however, what I read was somewhat less euphoric. The authors had quite simply interpreted the “energy transition” term literally and not, as is so often the case, simply deemed it an electric revolution. Reflecting this, the proportion of overall German energy needs met by wind turbines is only 1.2 %, and as low as 1 % for photovoltaics. And the reason behind all this is banal – electrical power consumption comprises only 14 % of overall energy needs. The fact is that only 3.6 % of the potential of energy transition has been realised to date. That got me thinking. Even if the underlying factors had been easily accessible, this was the first time they had been put in a common context. It brought home to me in no uncertain terms how far we still have to go to achieve the goal of nationwide CO₂-neutral transport using e-vehicles or power-to-X-based fuels.

Of course, I am all in favour of fuels going even part of the way to meeting increasingly urgent energy storage needs. On the other hand, reducing the energy consumed in the transport sector by just 8 % would save more energy than all wind turbines generate collectively, according to the study. Day in, day out, engineers at institutes, suppliers, service providers and vehicle manufacturers are grappling with this task under high pressure, namely by reducing vehicle energy requirements, a key part of which, as mentioned, involves further enhancing the efficiency of combustion engines.

The cover story of this issue is devoted to the latest developments. When you look at the bigger picture, each percentage point of fuel saved represents a key contribution to the energy revolution.

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