

**A NEW DAWN IN ENERGY TRANSITION –
RECOMMENDATIONS FROM PRACTICE TO
A NEW GERMAN GOVERNMENT**



A decisive decade lies ahead of us in the fight against climate change. If this global threat can only be averted collectively, solutions and model projects are needed that point the way to a sustainable and affordable future of energy supply. Despite the rising ambitions of an increasing number of countries, as demonstrated at the UN Climate Change Conference (COP26), real role models are missing that could bring about a breakthrough in the negotiations via a successful and also economically beneficial energy transition.

Countries are needed to demonstrate how and, in particular, that change is feasible and that it brings economic benefits in addition to the essential ecological effects. We welcome the ambitions of the EU Commission as well as those of the German government, but at the same time we would like to point out that there are persistent barriers that limit the acceleration of change. High bureaucratic hurdles in Germany result in lengthy approval processes for renewable energies, which should actually form the cornerstone of any further development.

While on the one hand the question of costs remains, on the other hand the difference between costs and investments must be in focus. Subsidies paved the way for the foundation of a sustainable energy supply through renewable energies. Today, the costs for new wind and solar PV plants are already below the running costs of existing fossil power plants in Germany. Thus, while the accelerated expansion of renewable energies requires massive investment, it does not generate costs.

The investment requirement, however, is at a level beyond all state possibilities. Only private capital can raise these funds and is thus the key to achieving the goal. Any state support will be measured against additional incentives for the private sector. While on the one hand the demand for sustainable investment opportunities continues to grow, on the other hand stable framework conditions are needed to make the investments possible. Since we as a company are active precisely at this future-critical interface, we would like to share our experience in the form of recommendations to a new German government.

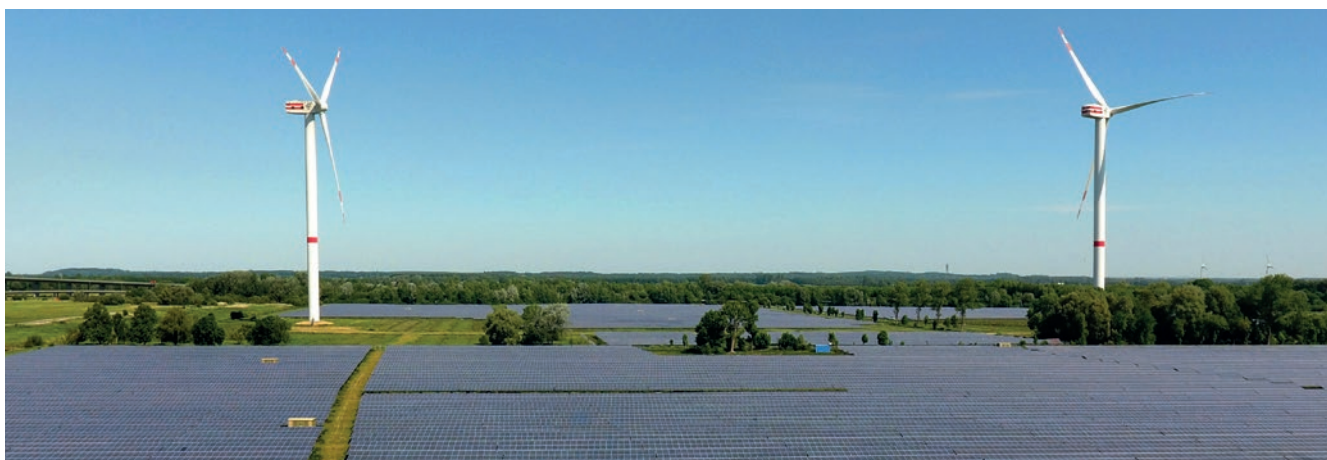
1. Electricity market design

The focus in this context is on the integration of renewable energies, i.e. reconciling fluctuating generation with relatively inflexible demand. This requires a flexibilisation of supply as well as demand.

In order to make supply more flexible, i.e. to match production with consumption, energy storage systems are indispensable. While batteries represent a sustainable and increasingly cost-effective option, there is a lack of regulatory frameworks to unleash this potential. It is imperative to change the status of batteries as energy consumers in order to reduce the burden of surcharges, taxes as well as grid costs (2/3 of the consumer price). In this course, they would be competitive with the bridging technology of flexible gas-fired power plants, which also have a counterproductive effect. While gas-fired power plants cause grid-related interruptions of renewable energies, result in high costs, maintain dependence on energy imports and cause persistent emissions, batteries would increase the stability of the grids and make the use of renewably generated energy more efficient. In short, they would reduce the current dual structure (renewables and gas) and thus significantly lower costs. The legally limited market access of batteries needs to be abolished (as the UK shows) to stabilise revenue opportunities and attract investment. In addition, further incentives for the expansion of flexibility can be created through technology-open auctions.

In addition to the energy transition, we are also in the midst of the digital transformation. But instead of seeing this as an additional separate challenge, the focus should be on synergy effects to be achieved. An accelerated expansion of smart meters makes it possible to use potentials lying in the grid. For example, bidirectional charging and discharging of batteries of an increasing number of EVs would increase flexibility on the demand side. While consumers could benefit from lower prices, the load on the grids and the efficient use of renewable energy would also benefit.

We also hope that a future government will increasingly bring its weight and economic arguments into the European discourse. A curtailment of renewable energy yields, as is currently being discussed in parts of Europe, would do enormous damage to the competitive advantages acquired through low-cost renewable sources and the associated incentives. Instead, the focus should be on the integration of the European energy markets, which would enormously increase the efficient and demand-oriented use of renewable energies and could result in corresponding cost reductions for consumers and stable prices for operators. Long-term strategies must take precedence over short-term adjustments.



2. Acceleration of solar-PV and onshore-wind buildout

Following the motto „all or nothing“, the current pending situation between old conventional energy production and sustainable renewable production must be broken. While the direction and the goals of the German government are clear, there are persistent barriers that challenge developers. To enable electrification in industry, transport, the building sector and private households, an acceleration in annual expansion of more than 100% is required.

To ensure this, a radical simplification and acceleration of approval procedures is essential. This requires political guidelines that set a clear framework with the designation of new wind priority areas that meet all criteria, thus also countering increased legal action at an early stage and significantly increasing legal certainty for private investors. The requirements for designating the type of wind turbi-

ne before permission are suitable for illustrating existing regulations and the resulting consequences. Under these conditions, applicants lose all negotiating power vis-à-vis manufacturers, while at the same time competition from turbine manufacturers for approved projects in Germany is completely prevented.

Simplified and faster approval procedures are also indispensable in the solar PV sector. Innovative installations, for example mixed uses such as agri-PV and floating-PV, which are the attraction of this technology, lack clear definitions and legal frameworks. The issuance of framework permits for specific areas and technologies with limited recourse and third-party appeal rights would significantly reduce the hurdles and give new impetus to the currently most cost-effective technology.

3. Establishing a hydrogen-economy

Hydrogen offers considerable potential, but a clear distinction should be made between what is technologically feasible and what is actually efficient. The focus should be on direct electrification as the more efficient option. Instead of seeing hydrogen as a future solution to a strategy characterised by the further expansion of gas-fired power plants, the focus should be on clear applications without alternatives. Thus, primarily the already existing demand for the raw material hydrogen (e.g. refineries, fertiliser production), which is largely covered by emission-intensive processes, should be successfully replaced by green hydrogen. This would strengthen market-based competition and result in technological progress and economies of scale. In the following, competitiveness would increase significantly

and also make the use in sectors that are difficult to electrify (e.g. heavy goods transport, steel production) increasingly economically attractive.

State subsidies have helped the technologies to become competitive. Now it is time to establish a comprehensive system on the market and reduce bureaucratic barriers in order to significantly increase the speed. Free market developments, supported by emissions trading and incentive programmes, point the way to accelerating the transformation and benefiting from increasing efficiency.

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