



## ENERGY STORAGE ENERGIESPEICHER

GAME CHANGER DER ENERGIEWIRTSCHAFT?  
GAME CHANGER FOR THE ENERGY INDUSTRY?

## CONTENT OF THE STUDY

Energy Storage has become the new buzzword of the German Energiewende. Strong fluctuations of power feed-in from wind and photovoltaics have caused a decoupling of power generation and power consumption. The situation will even get worse in the future.

Economically applicable power storage would have the potential to make the “Energiewende” controllable. Excess supply of green power could be stored, withdrawn in times of peak power consumption and used e.g. for e-mobility. Energy storage could balance load fluctuations in the power grid.

New energy storage technologies are available. They are getting into the stage of market maturity. Batteries, power to gas, compressed air storages, flywheels and other technologies are under discussion.

**At the same time situation is lacking transparency. The following questions arise:**

- What could be the total demand for energy storage in Germany?
- Which are the most important energy storage technologies, what are their characteristics and what are their fields of application?
- Which energy storage technologies do have chances to play a role in the context of German Energiewende?
- Which business models do arise?
- What are the conditions under which energy storage can fundamentally influence energy supply and thus become a “Game Changer” for the “Energiewende” and for public energy supply?
- Which chances and risks can be expected for energy suppliers?



**TEAM CONSULT** critically evaluates new energy storage technologies and their practical application in this comprehensive study. Future potential of specific state-of-the-art applications and business models is analyzed understandably with a time horizon till 2030. The study delivers important fundamentals for decision makers of the energy industry.

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- 1.2 How is the study structured? And what is its special focus?
- 1.3 What are the main findings of the study?

## 2. No successful Energiewende without Energy Storage!

- 2.1 What are the fundamentally new challenges of the Energiewende when renewable energy production interacts with power consumption?
- 2.2 How big is power storage demand till 2030?

## 3. Energy Storage Technologies are available – Their applicability depends on their individual characteristics! Description of functioning, characteristics and practical examples for:

- 3.1 Pumped storage
- 3.2 Batteries
- 3.3 Power to Heat
- 3.4 Power to Gas / Gas Storage
- 3.5 Compressed Air Storage
- 3.6 Flywheels
- 3.7 Super Capacitors
- 3.8 Superconducting Magnetic Storage



**4. Not all possible applications for Energy Storage will prevail in the Energy Market! Evaluation of future Potential under Cost/Benefit aspects as well as Identification of necessary Prerequisites for Applications to play a Role in the “Energiewende”. Analysis of the following applications:**

- 4.1 Small Scale Battery Storage in Combination with Photovoltaic Panels
- 4.2 Small Scale Battery Storage in Combination with Photovoltaic Panels and Small Scale CHP (Combined Heat and Power)
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**5. Economically applicable Energy Storage can be a Game Changer for Energiewende and Public Energy Supply! Consolidation of Findings for Energy Storage and Derivation of Chances and Risks**

- 5.1 What are possible Structural Changes of the Energy Market induced by Energy Storage?
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**6. Appendix**

- 6.1 Data Tables
- 6.2 Sources
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## TARGET GROUP

- Energy Suppliers / Large Energy Consumers
- Operators of Wind Parks and Photovoltaic Plants
- Power Plant Operators
- Energy Storage Operators
- Grid Operators (TSOs, DSOs)
- Producers and Suppliers of Energy Storage Solutions
- Regulatory Bodies, Ministries and Associations

## METHODOLOGY

- Consideration of / Reference to publically available Studies
- Own Data Research and Evaluation in own Models
- Reality Check of Results in Expert Interviews
- Demonstration of real-world Applications, Evaluation of Profitability and Suitability for Business Models

## ARE YOU INTERESTED?

We are happy to get in Contact with you in order to align on Scope of Services and Pricing.



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