# Summary of the study „Competitive market and system integration of renewables – Monetary consequences of the real-time transfer of electricity as well as possible freedoms granted to active stakeholders“ (Eva Hauser, Martin Luxenburger, Matthias Sabatier, Thorsten Lenck, Steffen Schmiedeke)

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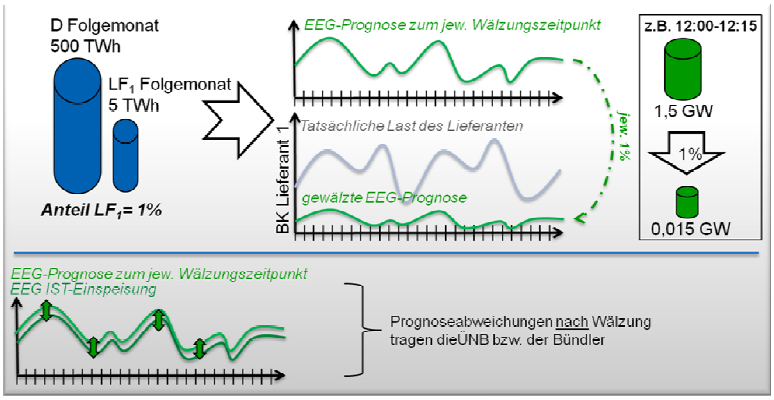
**Principle of real-time transfer**




**Results of the study**

- The growing shares of renewables require transformation processes with new task fields and market roles; the sooner these are introduced, the better the integration and balancing of, in particular, variable renewable energy can be used within learning processes as and an opportunity for change. Hereby existent competences such as the electricity distributors' knowledge of demand profiles and demand flexibility of consumers can be optimally integrated.
- Due to current framework conditions, such as the possibility of long-term procurement strategies, most distributors only make insufficient use of the flexibility potential that is available.
- That's why a real-time transfer model (short-term transfer of EEG electricity to distributors' balancing groups) was suggested, complemented by a residual market for flexibility options:
  - Due to the advantageous nature of central power forecasts, one central stakeholder, such as the TSO can ‚collect' the Germany-wide variable renewable energy
  - Modelled on the historic banding system (Bandwälzung), distributors predict their consumption for the following month, from which an apportionment formula is calculated and then a short-term (quarter hour) transfer of the national VRE profile is carried out
- This results in shared responsibility: The central collector is responsible for the quality of the feed forecasts while the distributors are responsible for maintaining a high quality of their own load forecasts as well as controlling the increasingly flexible residual procurement.
- Physical transfer requires additional management of volume, market and correlation risks on the part of the distributors. In order to do this there are three strategies that can be selected:
  1. Complete transfer of risk to customers via ex-post charges
  2. Fixing the price of the transferred variable renewable energy
  3. Fixing overall costs for the customer

  Assuming 95% of the cases do not generate losses for the distributors, a risk factor of 11.68 EUR/MWh is calculated for the transferred volume of electricity. Based on the customers' kWh consumption the required risk premium in separate months varies between 0.05 and 0.2 cents/kWh.
- Another option was developed, namely a differentiated allocation model for each type of technology, where a certain ratio leads to comparatively high requirements, as does the real-time transfer.

**For a detailed analysis, please refer to the study available on our homepage: www.bee-ev.de**