Demand as Frequency Controlled Reserve: Final report of the PSO project

This report summaries the research outcomes of the project ‘Demand as Frequency Controlled Reserve (DFR)’, which has received the support from Energinet.dk’s PSO program, Grant no. 2005-2-6380. The objective of this project is to investigate the technology of using electricity demands for providing frequency reserve to power systems. The project consists of five work packages, including:

- Background and perspective
- Dynamical simulation of chosen concepts
- Monitoring demand as frequency controlled reserve
- Strategy and practical implementation
- Conclusion and evaluation

Within the project, the frequency quality of power systems has been evaluated, the potential and economy of DFR compatible loads in Denmark has been investigated, control logic has been designed, power system impact has been investigated, potential monitoring method and business models have been evaluated and an implementation strategy has been suggested. The tasks and goals of the project have been successfully accomplished based on which the conclusion and future recommendation have been made.

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