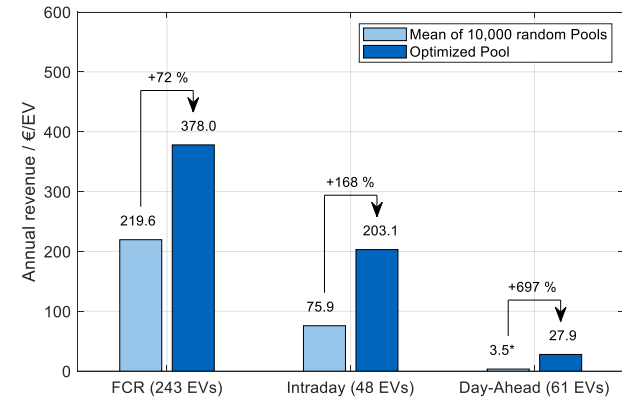
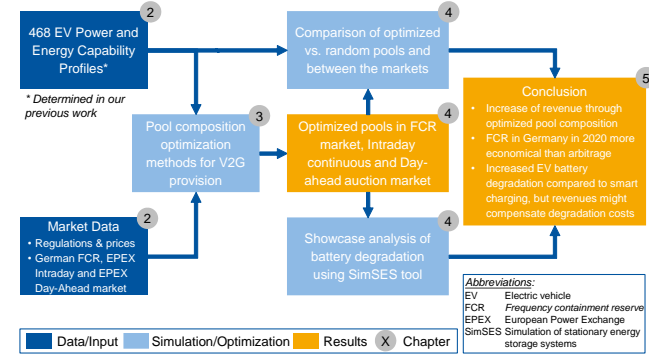


Optimal pool composition of commercial electric vehicles in V2G fleet operation of various electricity markets

In this work, commercial electric vehicles (EVs) were combined in an optimal manner for V2G provision. For this, power and energy capability profiles of individual EVs from a previous work were used. The revenue of possible vehicle pool compositions were maximized using genetic algorithms.

- Methodology to optimize commercial EV pool composition for V2G services.
- Simulation of EV pooling to provide balancing power (FCR) and arbitrage trading.
- Optimized pool composition enables an increase in revenue per EV of up to 7-fold.
- Showcase analysis of battery-specific costs arising from degradation in V2G.



Tepe, B; Figgner, J; Englberger, S.; Sauer, D.; Jossen, A.; Hesse, H.: *Optimal pool composition of commercial electric vehicles in V2G fleet operation of various electricity markets*, in: *Applied Energy* 308, <https://doi.org/10.1016/j.apenergy.2021.118351>, 2021