

Aggregated demand-side energy flexibility : a comprehensive review on characterization, forecasting and market prospects

Plaum, Freddy; Ahmadiyahangar, Roya; Rosin, Argo; Kilter, Jako Energy reports 2022 / p. 9344-9362

<https://doi.org/10.1016/j.egy.2022.07.038> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Aggregated energy flexibility provision using residential heat pumps

Plaum, Freddy; Ahmadiyahangar, Roya; Rosin, Argo 2022 IEEE 16th International Conference on Compatibility, Power

Electronics, and Power Engineering (CPE-POWERENG) 2022 / 5 | <https://doi.org/10.1109/CPE-POWERENG54966.2022.9880898>

AI technologies and their applications in small-scale electric power systems

Shahid, Arqum; Plaum, Freddy; Korõtko, Tarmo; Rosin, Argo IEEE Access 2024 / p. 109984-110001

<https://doi.org/10.1109/ACCESS.2024.3440067> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Assessment of power system asset dispatch under different local energy community business models

Korõtko, Tarmo; Plaum, Freddy; Häring, Tobias; Mutule, Anna; Lazdins, Roberts; Boršcevs, Olegs; Rosin, Argo; Carroll,

Paula Energies 2023 / art. 3476 <https://doi.org/10.3390/en16083476> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Flywheel model for microgrid simulation

Plaum, Freddy 19th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Tartu, Estonia, January 14-17, 2020 2020 / p. 157-158 : ill https://www.ester.ee/record=b5291755*est

Impacts of grid-scale battery systems on power system operation, case of Baltic region

Ahmadiyahangar, Roya; Plaum, Freddy; Häring, Tobias; Drovtar, Imre; Korõtko, Tarmo; Rosin, Argo IET Smart Grid 2024 / p.

101-119 <https://doi.org/10.1049/stg2.12142> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Info-gap-based optimization of microgrids integrated with power, cooling and hydrogen generation units

Mahmoudnezhad, Fayeze; Mirzaei, Mohammad Amin; Plaum, Freddy; Ahmadiyahangar, Roya; Kilter, Jako; Rosin, Argo

2022 IEEE 16th International Conference on Compatibility, Power Electronics, and Power Engineering (CPE-POWERENG) 2022 / 7 | <https://doi.org/10.1109/CPE-POWERENG54966.2022.9880860>

Local energy community power system asset dispatch optimization

Plaum, Freddy 22nd International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology III : Pärnu, Estonia, August 23-26, 2023 2023 / p. 91-92 https://www.ester.ee/record=b5570906*est

Novel quantification method of aggregated energy flexibility based on power-duration curves

Plaum, Freddy; Rosin, Argo; Ahmadiyahangar, Roya IEEE Access 2024 / p. 132825-132837

<https://doi.org/10.1109/ACCESS.2024.3461151> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Power smoothing in smart buildings using flywheel energy storage

Plaum, Freddy; Häring, Tobias; Ahmadiyahangar, Roya; Rosin, Argo Proceedings : 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Online - Setúbal, Portugal, 08 - 10 July, 2020 2020 /

p. 473-477 <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161458>

Research and development of quantification methods for aggregated energy flexibility = Agregeeritud energiapaindlikkuse kvantifitseerimismeetodi uurimine ja arendamine

Plaum, Freddy 2025 <https://digikogu.taltech.ee/et/Item/3e244995-0b3a-4efd-8f68-6e7e4268576f> https://www.ester.ee/record=b5746292*est

<https://doi.org/10.23658/taltech.28/2025>

Thermal network simulation of heat pump aggregated energy flexibility

Plaum, Freddy 21st International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Pärnu, Estonia, June 15-18, 2022 2022 / p. 101-102 : ill https://www.ester.ee/record=b5504019*est

Using V2G technology as virtual active power filter for flexibility enhancement of HVDC systems

Zolfaghari, Mahdi; Ahmadiyahangar, Roya; Gharehpetian, Gevorg B.; Rosin, Argo; Plaum, Freddy Proceedings : 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Online - Setúbal,

Portugal, 08 - 10 July, 2020 2020 / p. 489-494 : ill <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161602>