

# Energy Storage Enterprise Cooperation and Franchise Plan

What is a cooperation framework of energy storage sharing?

Abstract: This article proposes a new cooperation framework of energy storage sharing that comprises prosumers, energy storage providers (ESPs), and a middle agent to achieve social energy optimality. In this framework, the prosumers share multiple energy storages of the ESPs via the agent.

What is the energy storage strategy & roadmap (SRM)?

WASHINGTON, D.C. - The U.S. Department of Energy (DOE) today released its draft Energy Storage Strategy and Roadmap (SRM), a plan that provides strategic direction and identifies key opportunities to optimize DOE's investment in future planning of energy storage research, development, demonstration, and deployment projects.

Does the energy storage strategic plan address new policy actions?

This SRM does not address new policy actions, nor does it specify budgets and resources for future activities. This Energy Storage SRM responds to the Energy Storage Strategic Plan periodic update requirement of the Better Energy Storage Technology (BEST) section of the Energy Policy Act of 2020 (42 U.S.C. § 17232 (b) (5)).

What is the energy storage Grand Challenge (ESGC)?

In January 2020, DOE launched the Energy Storage Grand Challenge (ESGC) to facilitate a department-wide strategy to accelerate the development, commercialization, and use of next-generation energy storage technologies and sustain American global leadership in energy storage.

How to solve energy sharing optimization problem minimizing the total energy cost?

An energy sharing optimization problem minimizing the total energy cost is formulated involving the energy storage operation, the shiftable load schedule, and the energy trading with the utility. To solve the problem, a fast alternating direction multiplier method (ADMM) with restart which converges faster than traditional ADMM is adopted.

How do prosumers share energy storage?

In this framework, the prosumers share multiple energy storages of the ESPs via the agent. An energy sharing optimization problem minimizing the total energy cost is formulated involving the energy storage operation, the shiftable load schedule, and the energy trading with the utility.



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