verified through small-signal eigenvalue stability analysis and confirmed by control optimization. The performance of the centralized optimal linear feedback controller is validated via the time-domain circuit-based simulation. It is depicted that the linear feedback controller can improve the grid stability margin both as an extra control layer and as a self-standing droop control function. The DC voltage oscillation index introduced can be used to compare these two scenarios, which shows that COLFC as an extra control layer has better oscillation damping.

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