1) Comparison between MPCOPF and MPDOPF: In this section, comparative analyses are carried out between MPCOPF and MPDOPF considering 5-hour time steps.

TABLE I: Comparative analyses between MPCOPF and MPDOPF

Metric	**MPCOPF**	**MPDOPF**
Line loss (kW)		
Substation real power (kW)		
Substation reactive power (kVAR)		
PV real power (kW)		
PV reactive power (kVAR)		
Substation power cost ($)		

Further, here the

TABLE II: ACOPF feasibility analyses

Metric	**MPDOPF**	**OpenDSS**
Line loss (kW)		
Substation real power (kW)		
Substation reactive power (kVAR)		
Max. voltage discrepancy (pu)		
Max. line loss discrepancy (pu)		
Max. substation power discrepancy (pu)		

TABLE III: Combined MPDOPF and OpenDSS Results (Substation Power Cost Minimization - 12 Hour Horizon)

Metric	**MPDOPF**	**OpenDSS**
Line Loss	194.14 kW	194.05 kW
Substation Real Power	10595.10 kW	10595.71 kW
Substation Reactive Power	2068.79 kVAr	2058.30 kVAr
PV Real Power	272.60 kW	272.60 kW
PV Reactive Power	66.04 kVAr	66.03 kVAr
Battery Real Power	-17.04 kW	-17.04 kW
Battery Reactive Power	-83.30 kVAr	-83.30 kVAr
Substation Power Cost	$1424.54	$1424.63
Demand Real Power	10657.21 kW	
Demand Reactive Power	5863.79 kVAr	

2) Scalability Analysis: Provide a separate graph for PV, Load forecasts for T = 5 and 10

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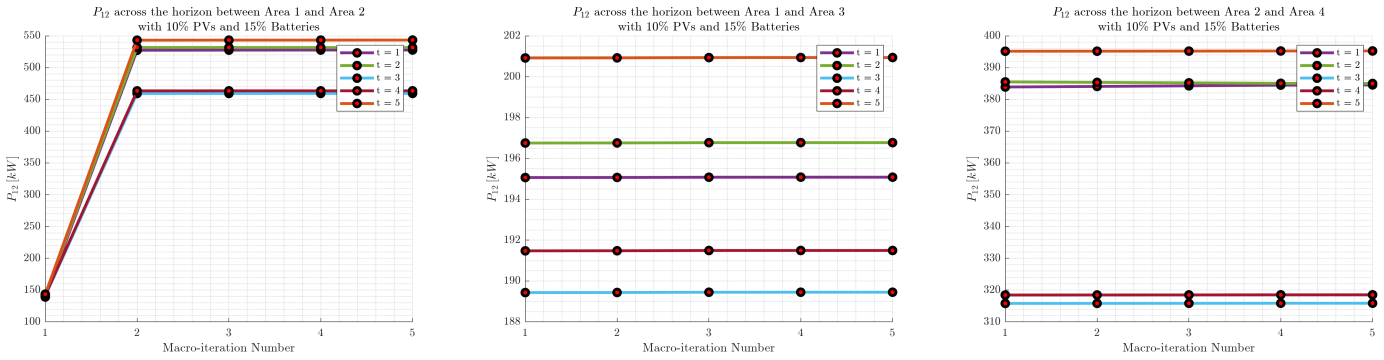
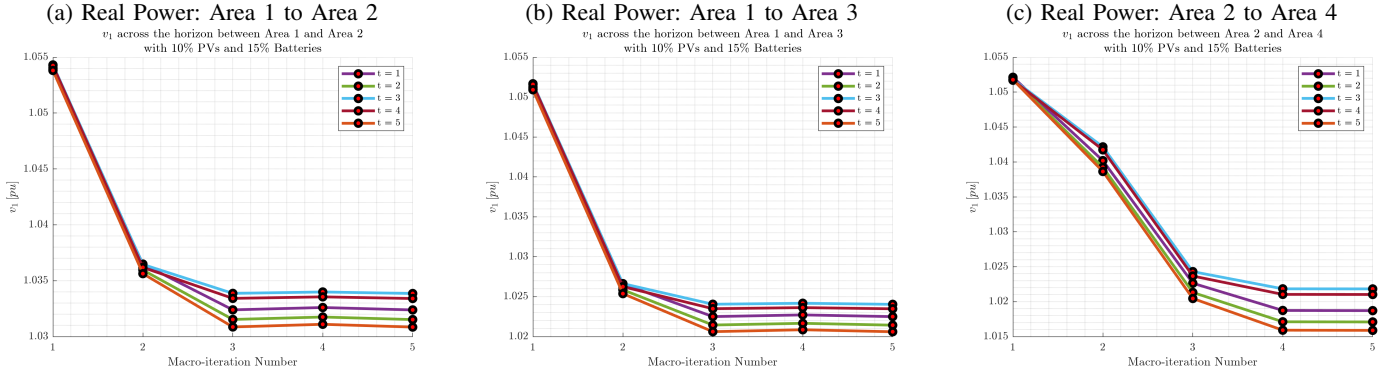


(a) Real Power: Area 1 to Area 2 (b) Real Power: Area 1 to Area 3 (c) Real Power: Area 2 to Area 4



(d) Voltage: Area 1 to Area 2 (e) Voltage: Area 1 to Area 3 (f) Voltage: Area 2 to Area 4

Fig. 1: Boundary variables exchanged between pairs of areas during each iteration

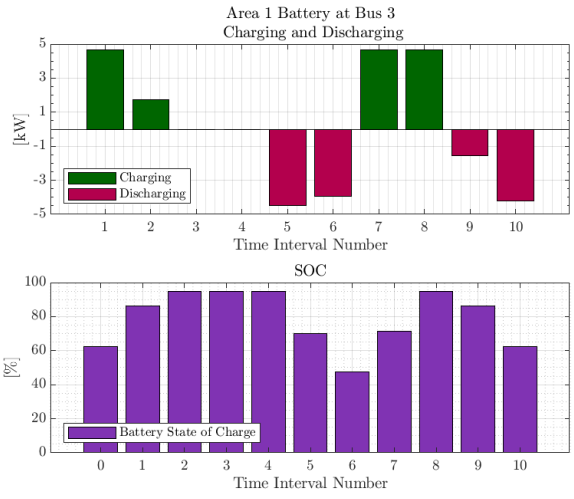


Fig. 2: Charging-Discharging and SOC graphs for Battery at Bus 3 located in Area 1 obtained via MultiPeriodENApp