TABLE I: Comparative analyses between BFM-NL and LinDistFlow - IEEE123 System for 24 time-period horizon

Metric	BFM-NL	LinDistFlow[O]
Largest subproblem		
Decision variables	0000	12096
Linear constraints	0000	22200
Nonlinear constraints	0000	0
Simulation results		
Substation power cost ($)	0000	2798.4
Substation real power (kW)	0000	21065.89
Line loss (kW)	0000	461.38
Substation reactive power (kVAR)	0000	12259.29
PV reactive power (kVAR)	0000	195.12
Battery reactive power (kVAR)	0000	204.63
Computation		
Number of Iterations	0000	1
Total Simulation Time (s)	0000	0.85

TABLE IV: ACOPF feasibility analyses - 24 hour

Metric	BFM-NL	LinDistFlow
Max. all-time discrepancy		
Voltage (pu)	0000	0.002056
Line loss (kW)	0000	1.807435
Substation power (kW)	0000	32.362217
Substation reactive power (kVAR)	0000	64.402519

TABLE II: ACOPF feasibility analyses - 5 hour

Metric	MPDOPF	OpenDSS
Full horizon		
Substation real power (kW)	4308.14	4308.35
Line loss (kW)	76.12	76.09
Substation reactive power (kVAR)	656.24	652.49
Max. all-time discrepancy		
Voltage (pu)	0.0002	
Line loss (kW)	0.0139	
Substation power (kW)	0.3431	

TABLE III: Comparison between Nonlinear BFM and LinDistFlow - 10 hour

Metric	Nonlinear BFM	LinDistFlow
Largest subproblem		
Decision variables	6300	2640
Linear constraints	11636	4891
Nonlinear constraints	1270	530
Simulation results		
Substation power cost ($)	1197.87	1197.87
Substation real power (kW)	8544.28	8544.04
Line loss (kW)	148.67	148.94
Substation reactive power (kVAR)	1092.39	1252.03
PV reactive power (kVAR)	222.59	139.81
Battery reactive power (kVAR)	388.52	310.94
Computation		
Number of Iterations	-	5
Total Simulation Time (s)	4620.73	358.69