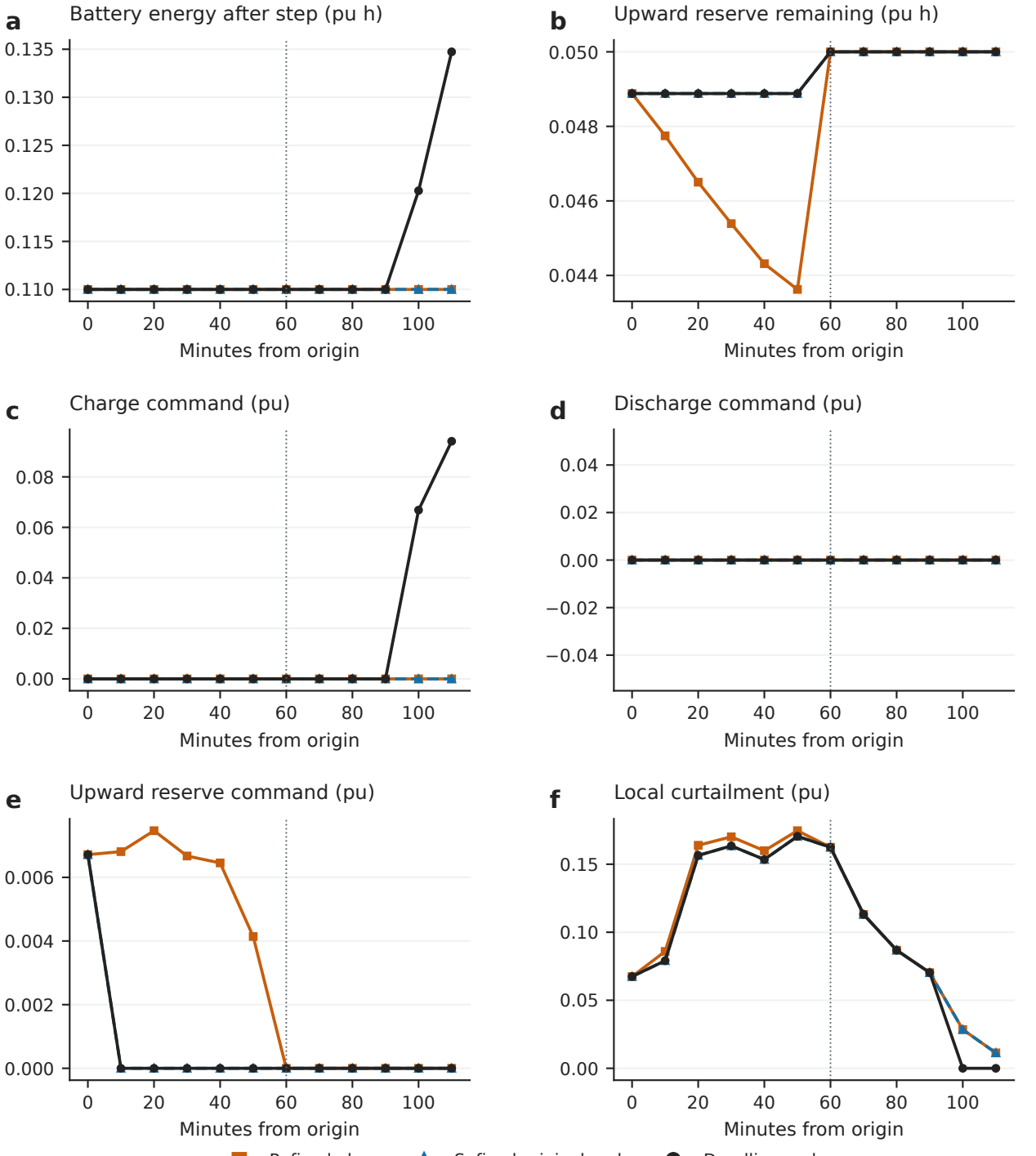

a
Battery energy after step (pu h)
0.135
0.130
0.125
0.120
0.115
0.110
0
20
40
60
80
100
Minutes from origin
b
Upward reserve remaining (pu h)
0.050
0.048
0.046
0.044
0
20
40
60
80
100
Minutes from origin
c
Charge command (pu)
0.08
0.06
0.04
0.02
0.00
0
20
40
60
80
100
Minutes from origin
d
Discharge command (pu)
0.04
0.02
0.00
−0.02
−0.04
0
20
40
60
80
100
Minutes from origin
e
Upward reserve command (pu)
0.006
0.004
0.002
0.000
0
20
40
60
80
100
Minutes from origin
f
Local curtailment (pu)
0.15
0.10
0.05
0.00
0
20
40
60
80
100
Minutes from origin
P: fixed plan
S: fixed original end
D: rolling end