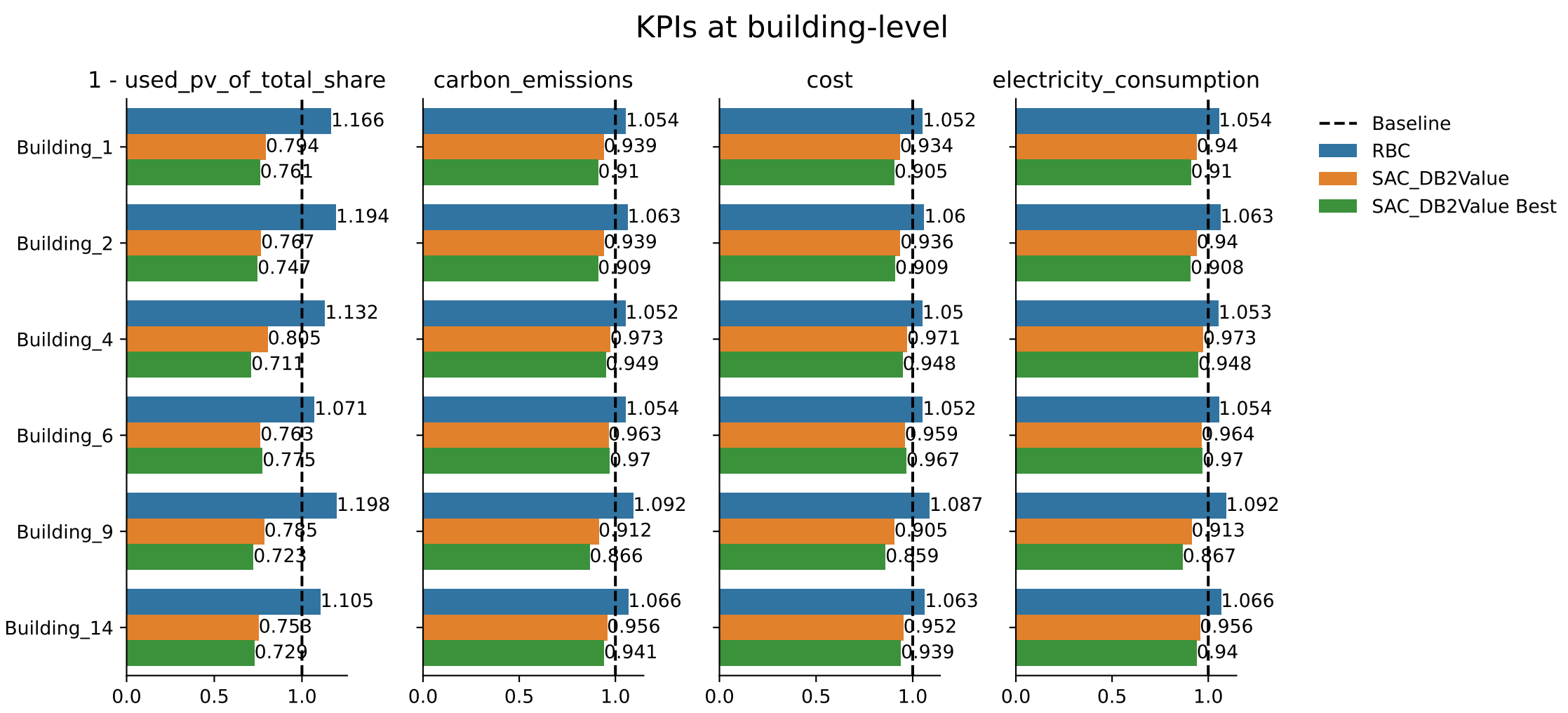
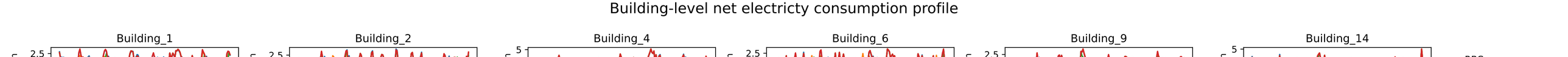
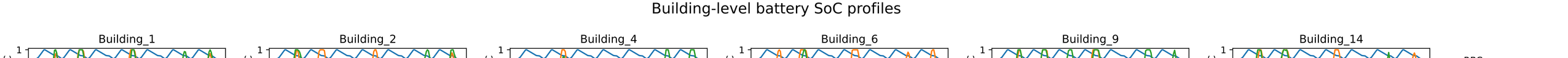
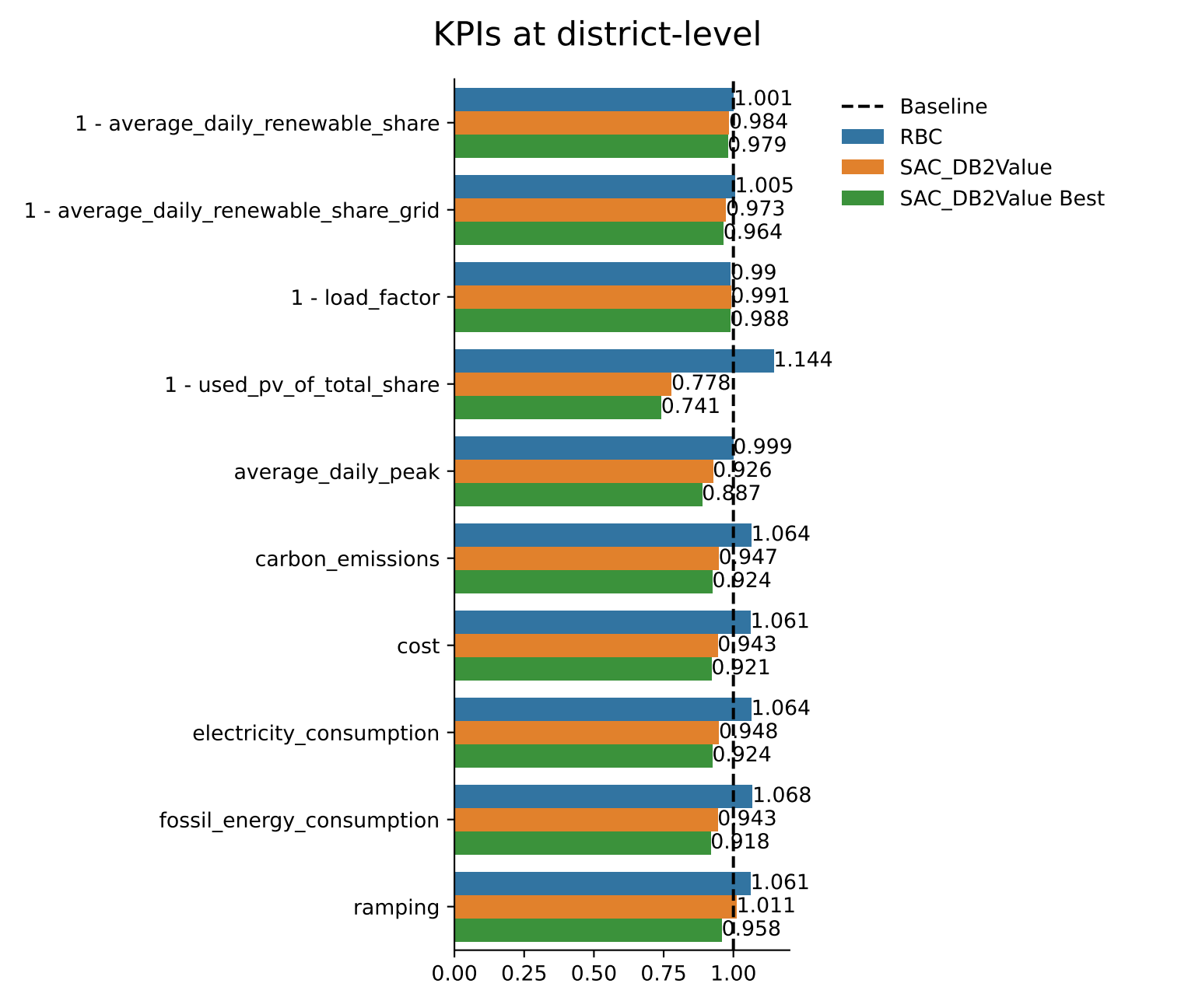
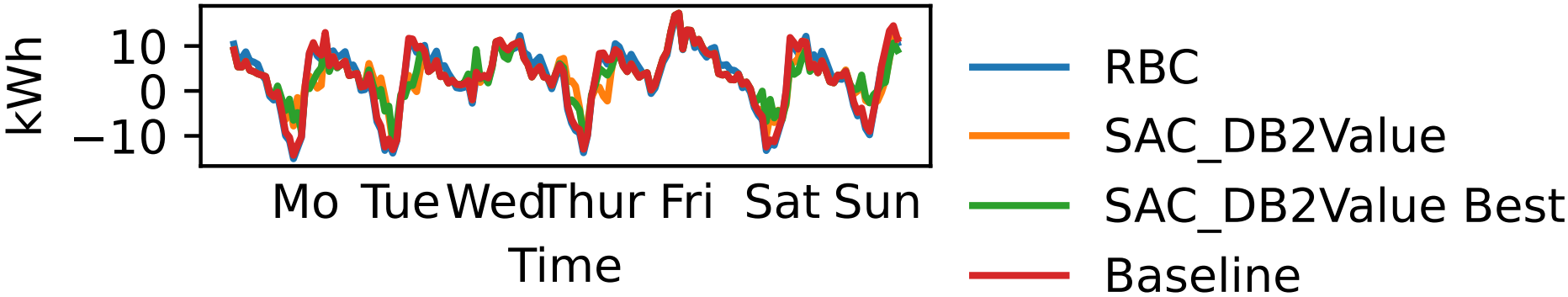

KPIs at building-level
1 - used_pv_of_total_share
carbon_emissions
cost
electricity_consumption
Building_1
Building_2
Building_4
Building_6
Building_9
Building_14
1.166
0.794
0.761
1.194
0.767
0.747
1.132
0.805
0.711
1.071
0.763
0.775
1.198
0.785
0.723
1.105
0.758
0.729
1.054
0.939
0.91
1.063
0.939
0.909
1.052
0.973
0.949
1.054
0.963
0.97
1.092
0.912
0.866
1.066
0.956
0.941
1.052
0.934
0.905
1.06
0.936
0.909
1.05
0.971
0.948
1.052
0.959
0.967
1.087
0.905
0.859
1.063
0.952
0.939
1.054
0.94
0.91
1.063
0.94
0.908
1.053
0.973
0.948
1.054
0.964
0.97
1.092
0.913
0.867
1.066
0.956
0.94
0.0
0.5
1.0
Baseline
RBC
SAC_DB2Value
SAC_DB2Value Best

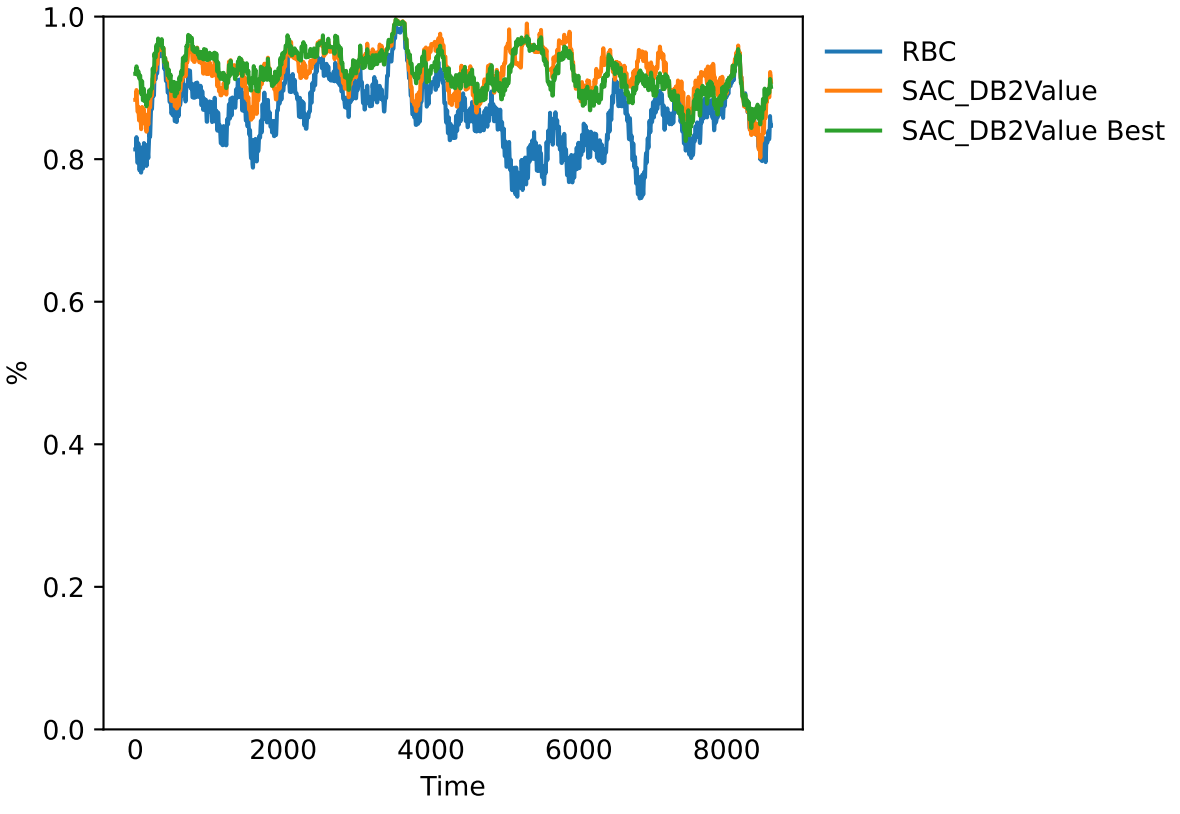

Building-level net electricty consumption profile
Building_1
Building_2
Building_4
Building_6
Building_9
Building_14
kWh
Time
Mo Tue Wed Thur Fri Sat Sun
RBC
SAC_DB2Value
SAC_DB2Value Best
Baseline

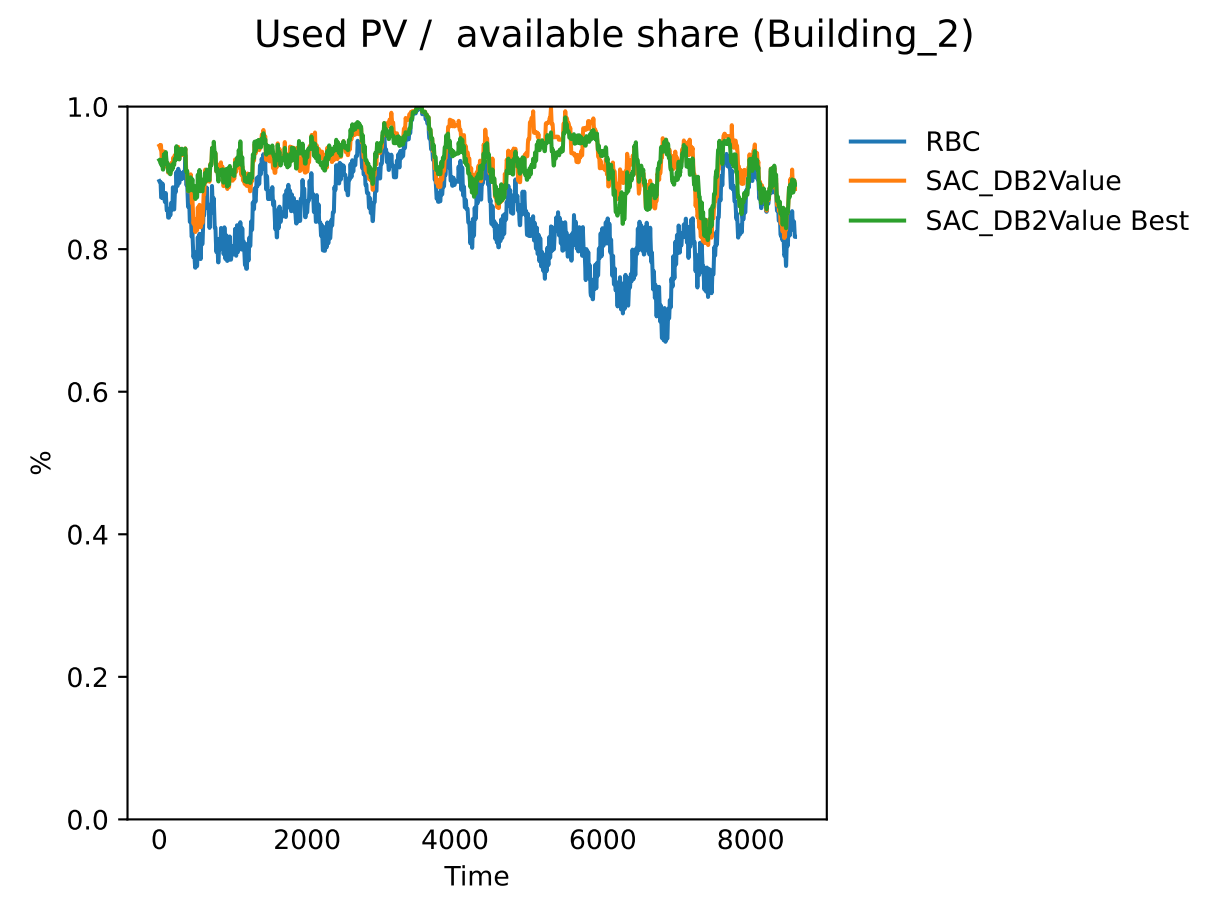

Building-level battery SoC profiles
Building_1
Building_2
Building_4
Building_6
Building_9
Building_14
SoC
1
0
Mo
Tue
Wed
Thur
Fri
Sat
Sun
Time
RBC
SAC_DB2Value
SAC_DB2Value Best

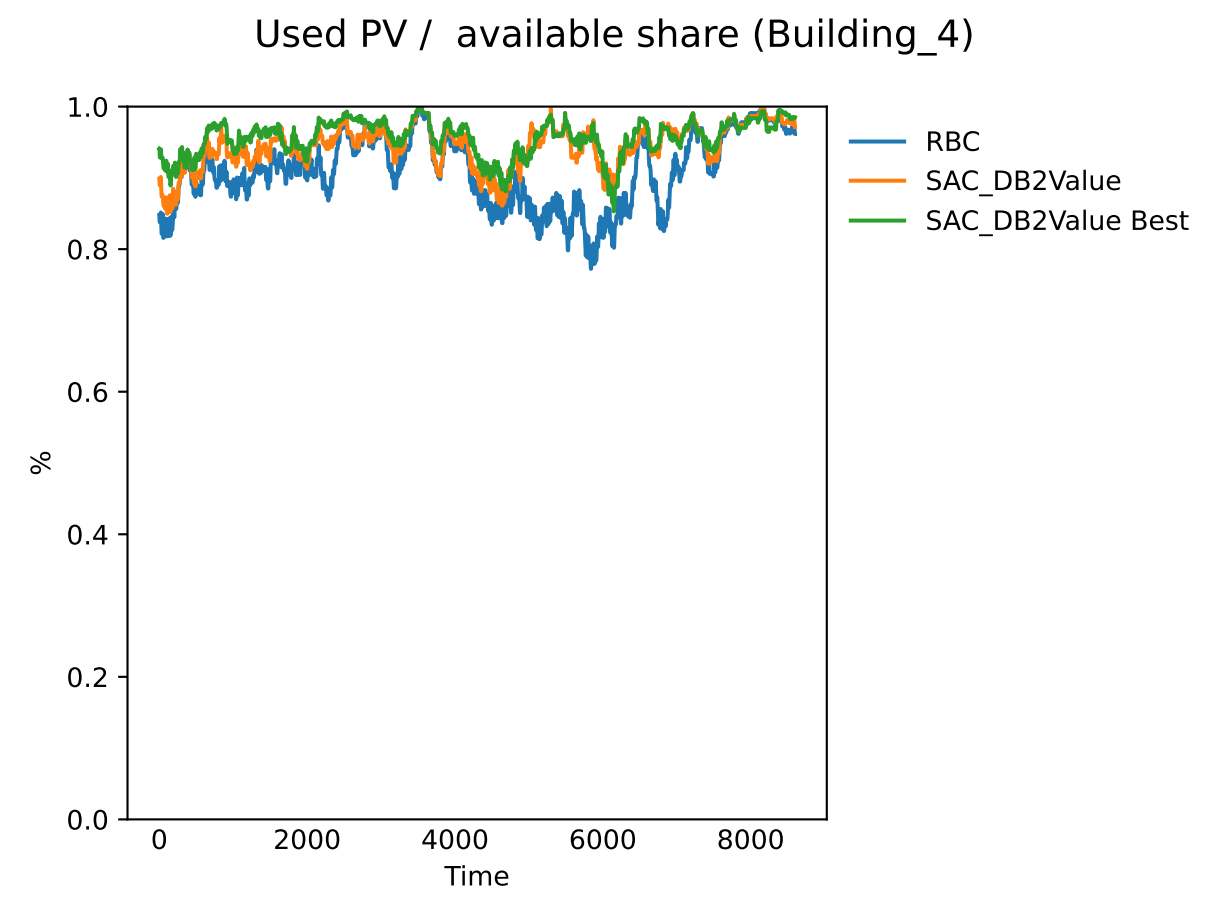

KPIs at district-level
1 - average_daily_renewable_share
1 - average_daily_renewable_share_grid
1 - load_factor
1 - used_pv_of_total_share
average_daily_peak
carbon_emissions
cost
electricity_consumption
fossil_energy_consumption
ramping
1.001
0.984
0.979
1.005
0.973
0.964
0.99
0.991
0.988
1.144
0.778
0.741
0.999
0.926
0.887
1.064
0.947
0.924
1.061
0.943
0.921
1.064
0.948
0.924
1.068
0.943
0.918
1.061
1.011
0.958
0.00
0.25
0.50
0.75
1.00
Baseline
RBC
SAC_DB2Value
SAC_DB2Value Best

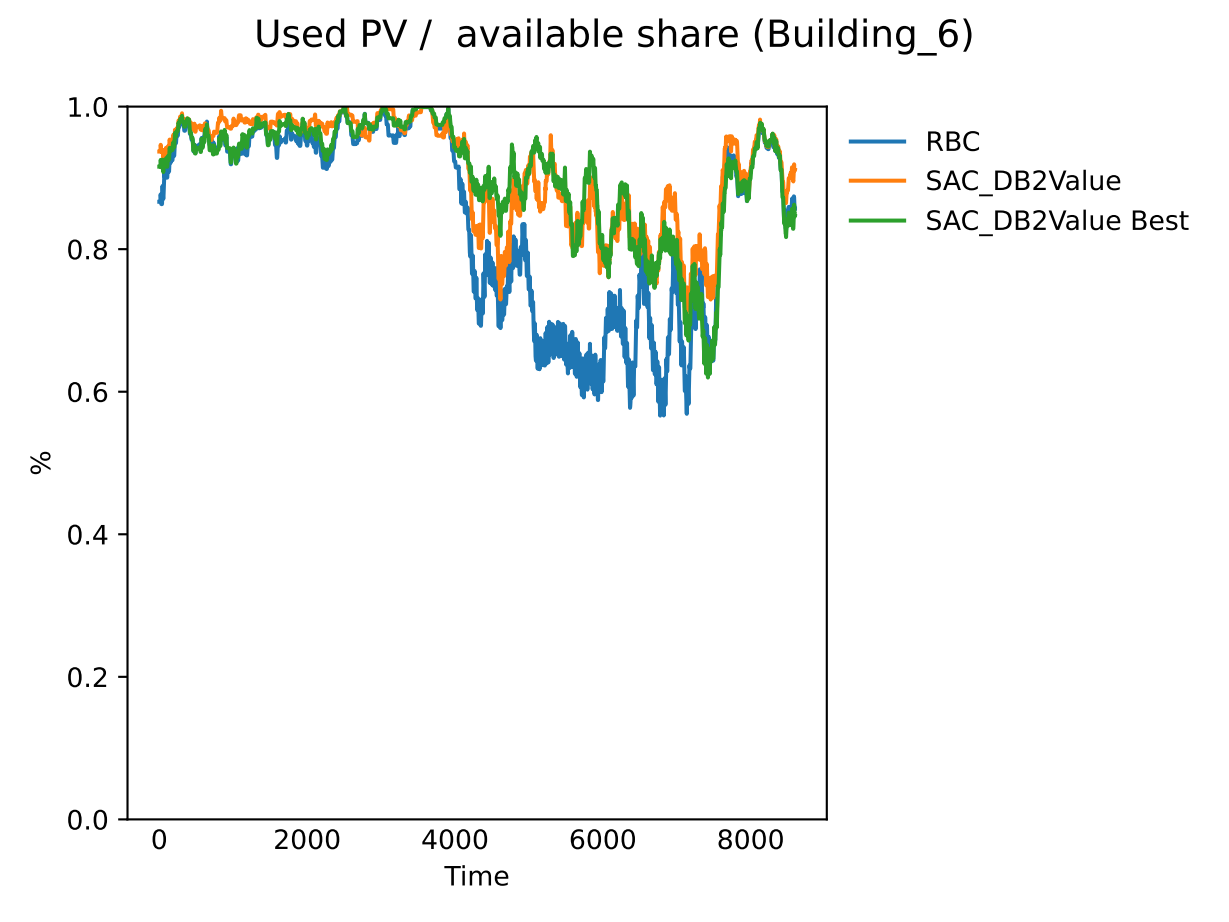
District-level net electricty consumption profile

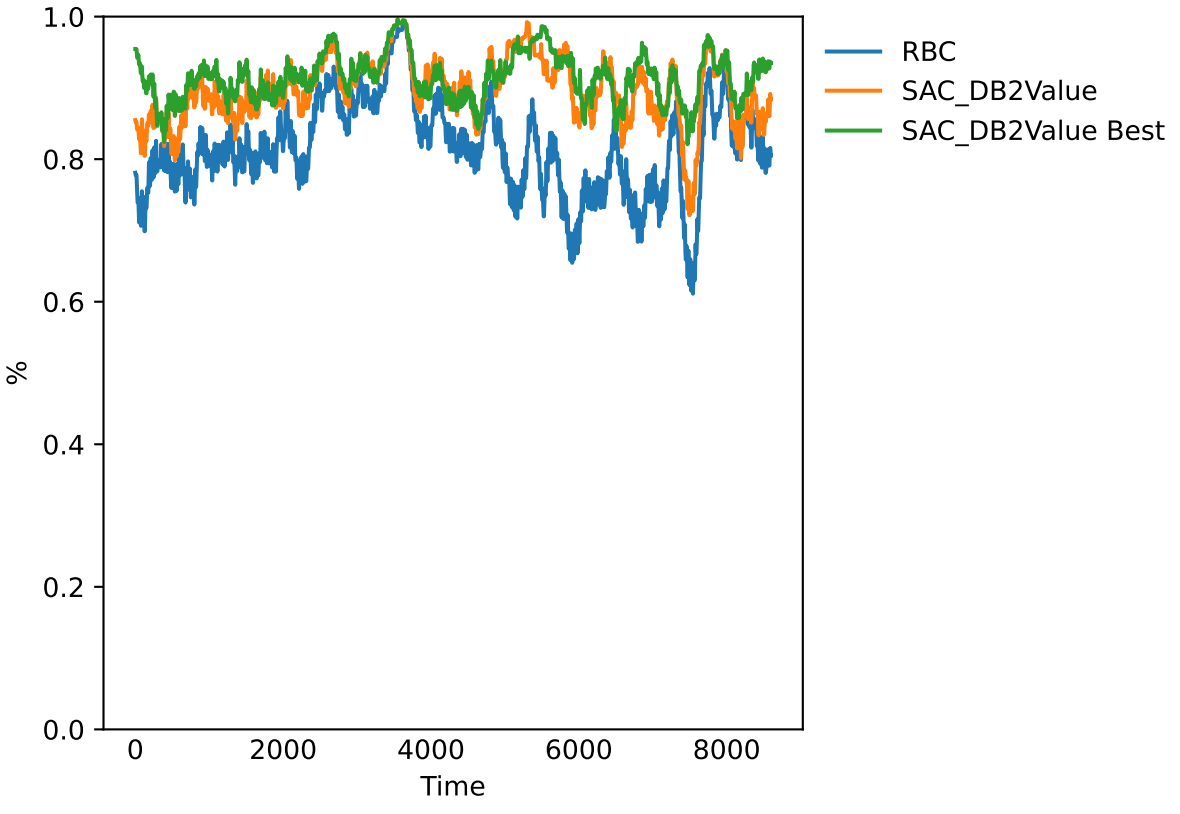


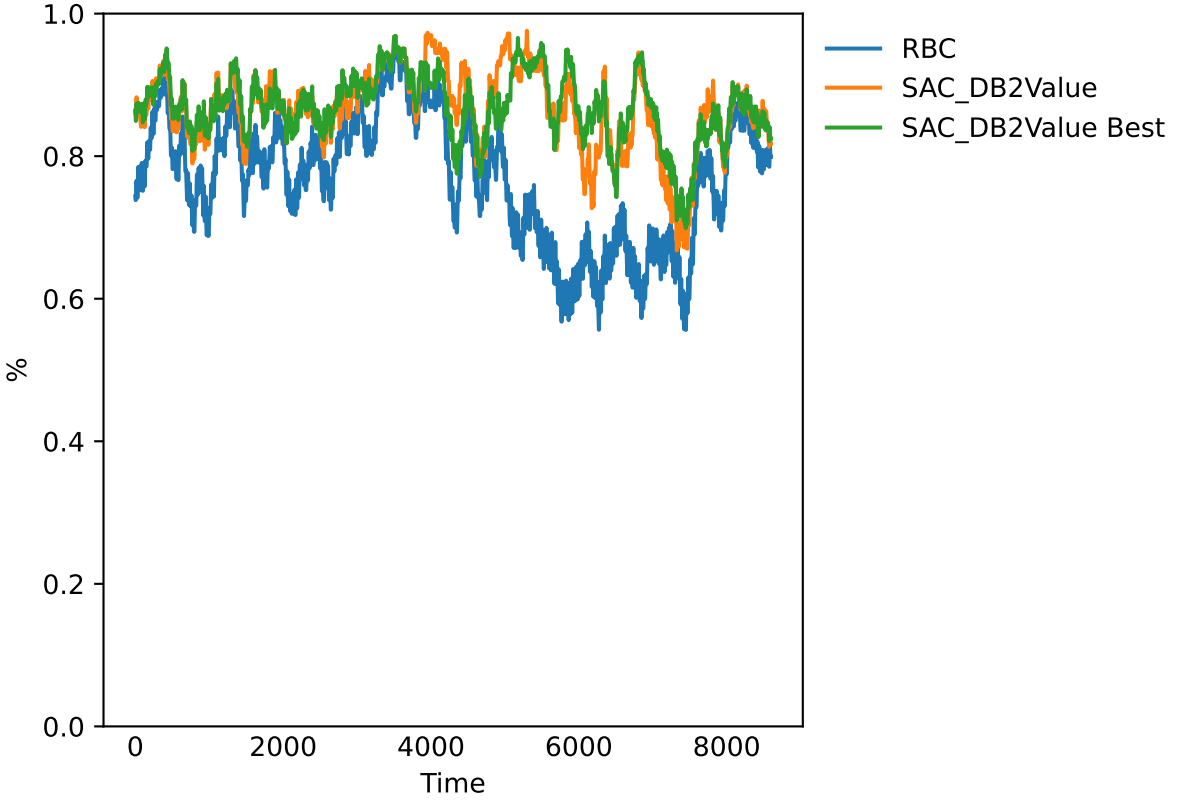

Used PV / available share (Building_1)
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best

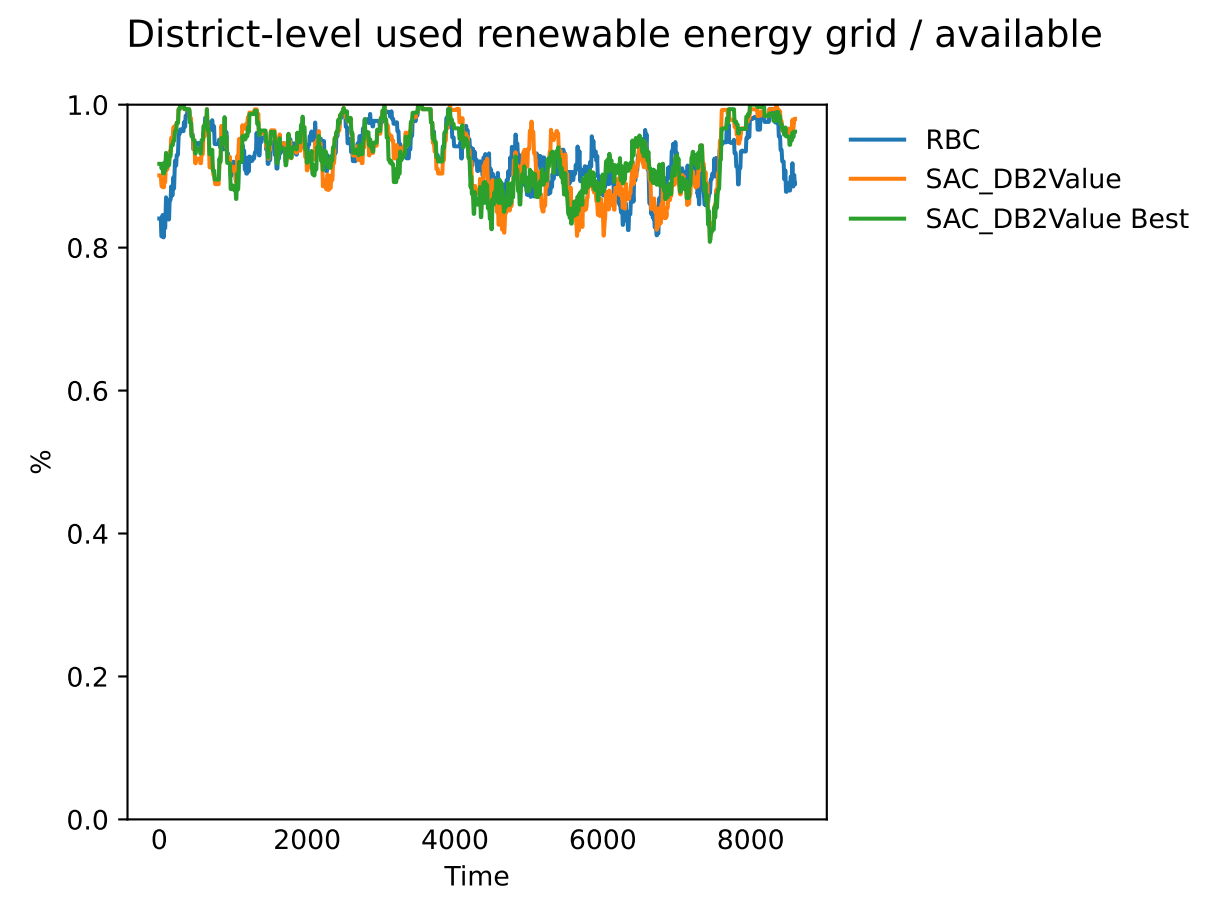

Used PV / available share (Building_2)
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best

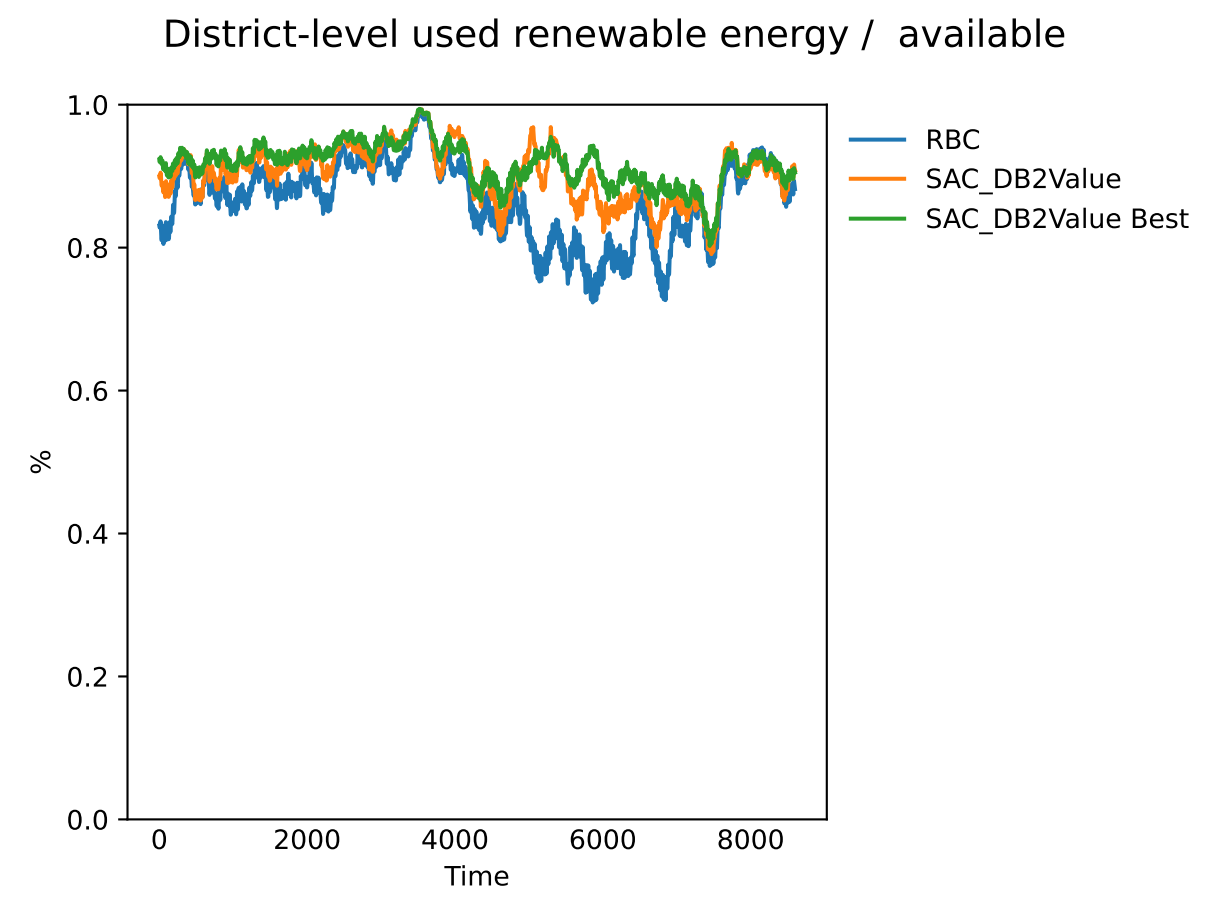

Used PV / available share (Building_4)
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best

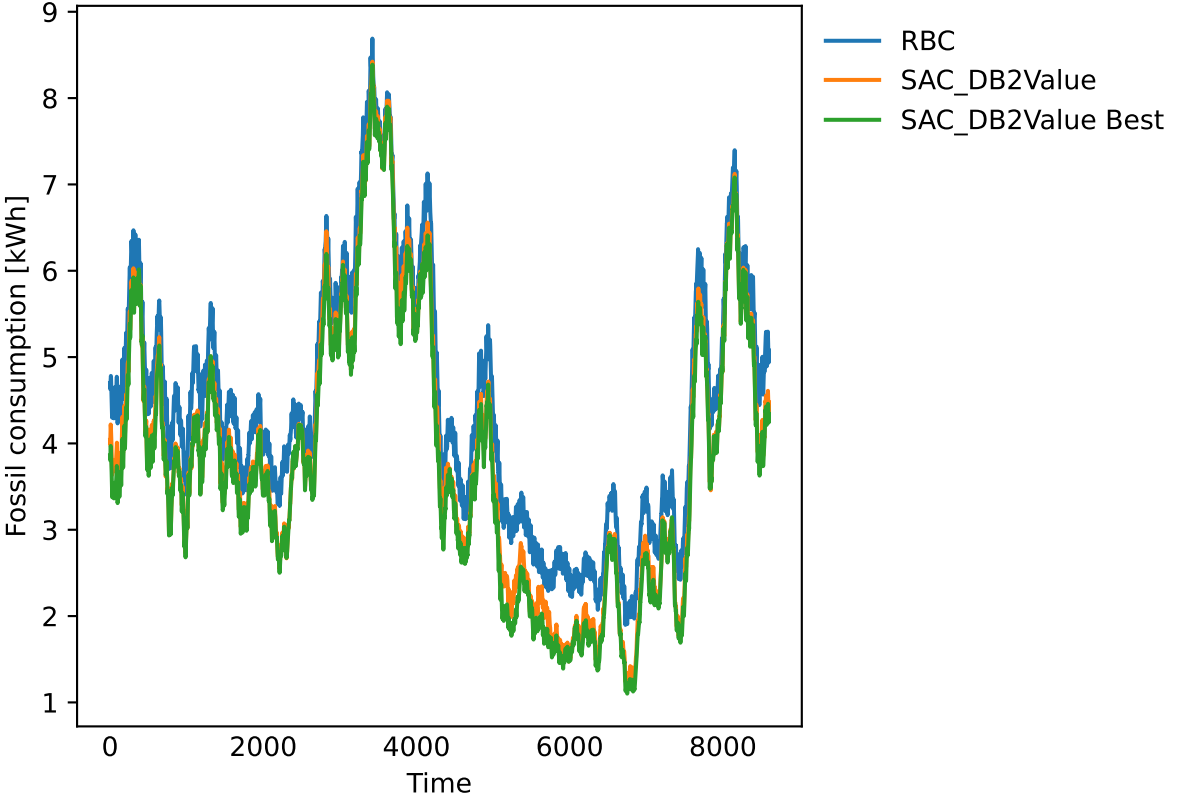

Used PV / available share (Building_6)
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best


Used PV / available share (Building_9)
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best


Used PV / available share (Building_14)
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best


District-level used renewable energy grid / available
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best

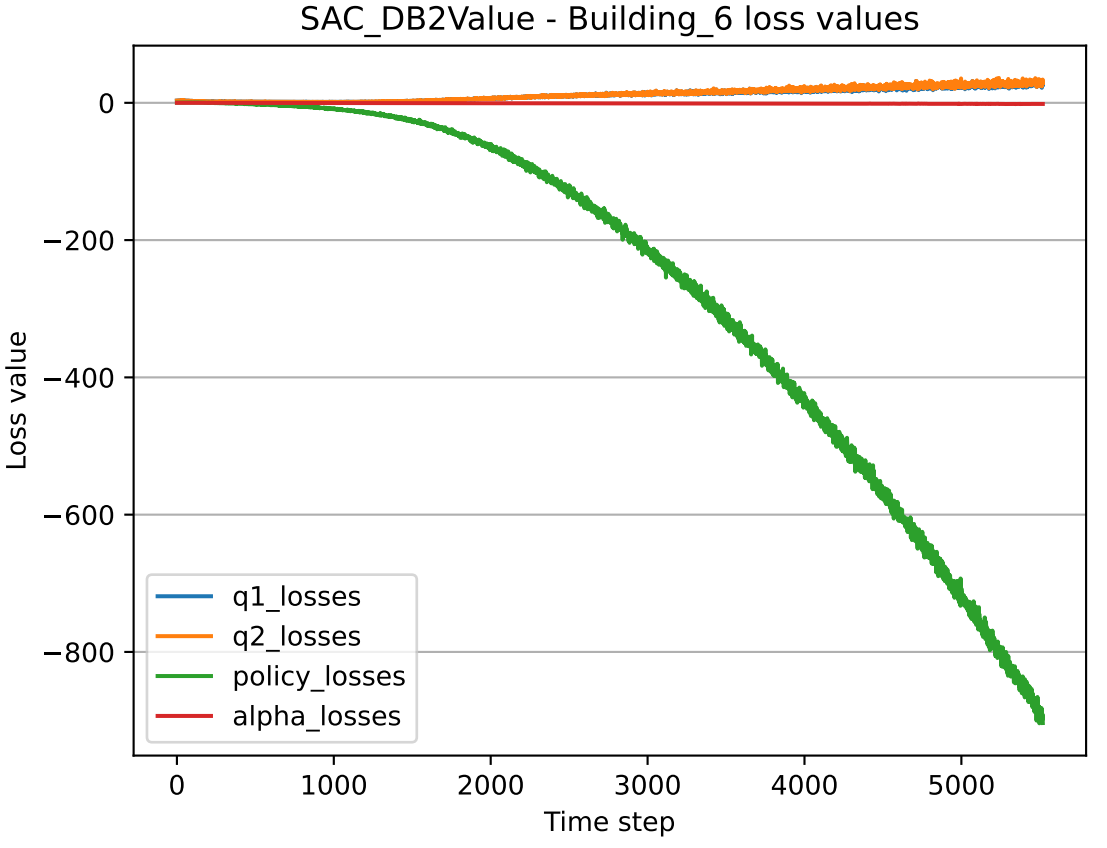

District-level used renewable energy / available
1.0
0.8
0.6
0.4
0.2
0.0
%
0
2000
4000
6000
8000
Time
RBC
SAC_DB2Value
SAC_DB2Value Best

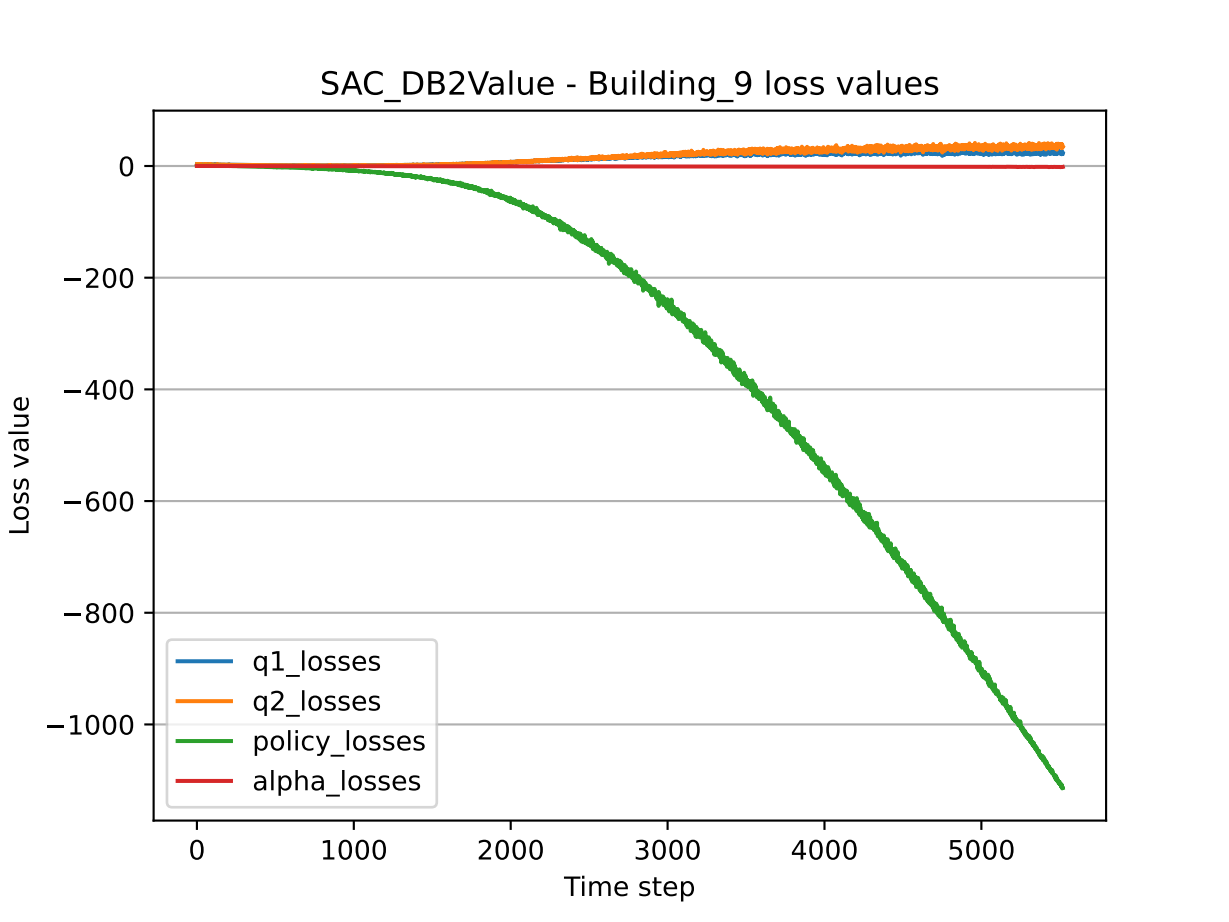

District-level fossil energy consumption
Fossil consumption [kWh]
Time
RBC
SAC_DB2Value
SAC_DB2Value Best
1
2
3
4
5
6
7
8
9
0
2000
4000
6000
8000

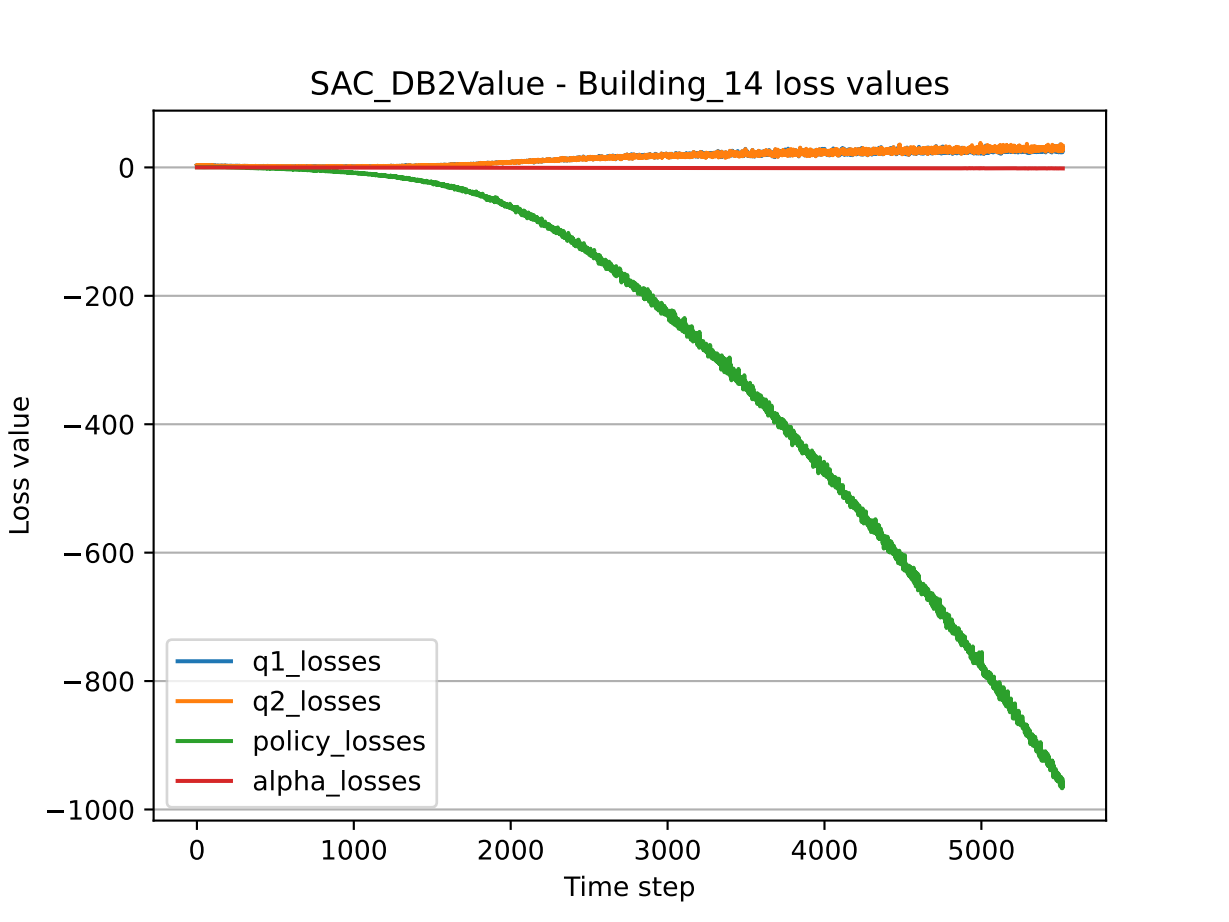
SAC_DB2Value - Building_1 loss values
Loss value
Time step
0
−200
−400
−600
−800
−1000
0
1000
2000
3000
4000
5000
q1_losses
q2_losses
policy_losses
alpha_losses

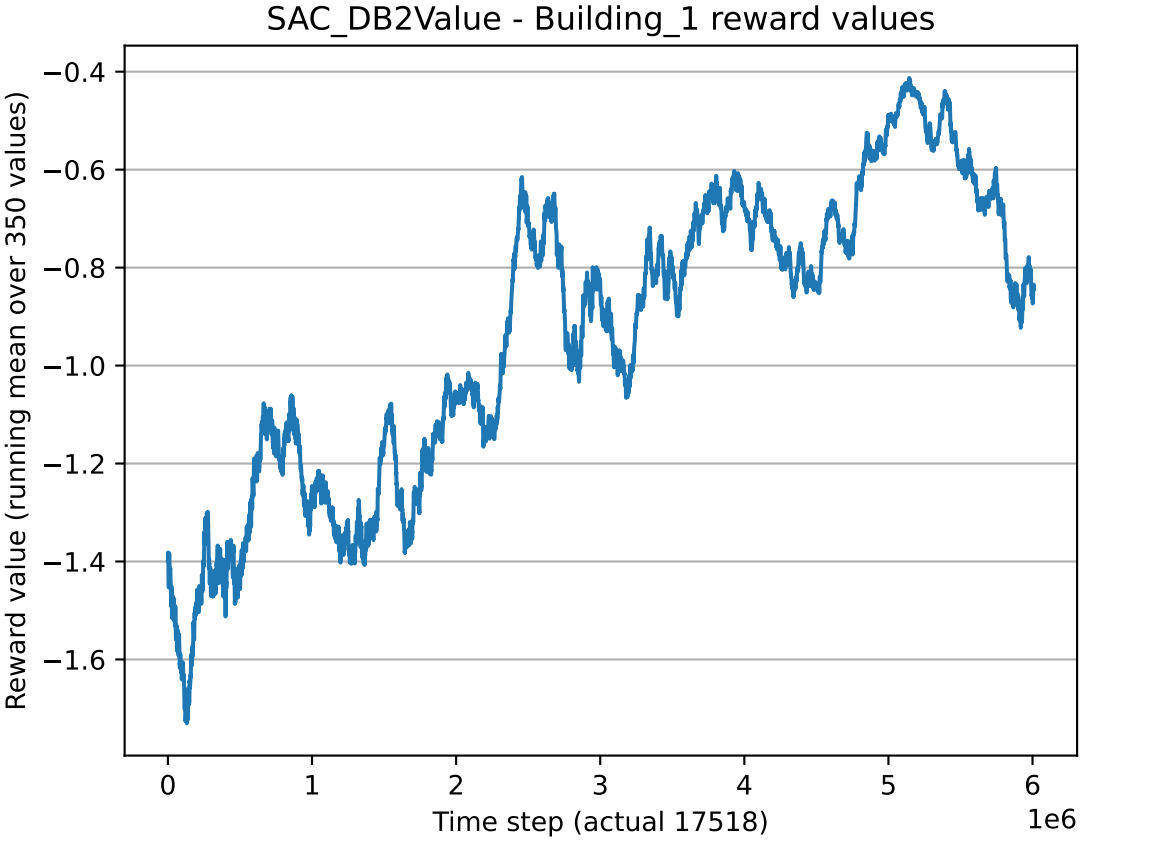
SAC_DB2Value - Building_2 loss values
Loss value
Time step
0
−200
−400
−600
−800
−1000
0
1000
2000
3000
4000
5000
q1_losses
q2_losses
policy_losses
alpha_losses

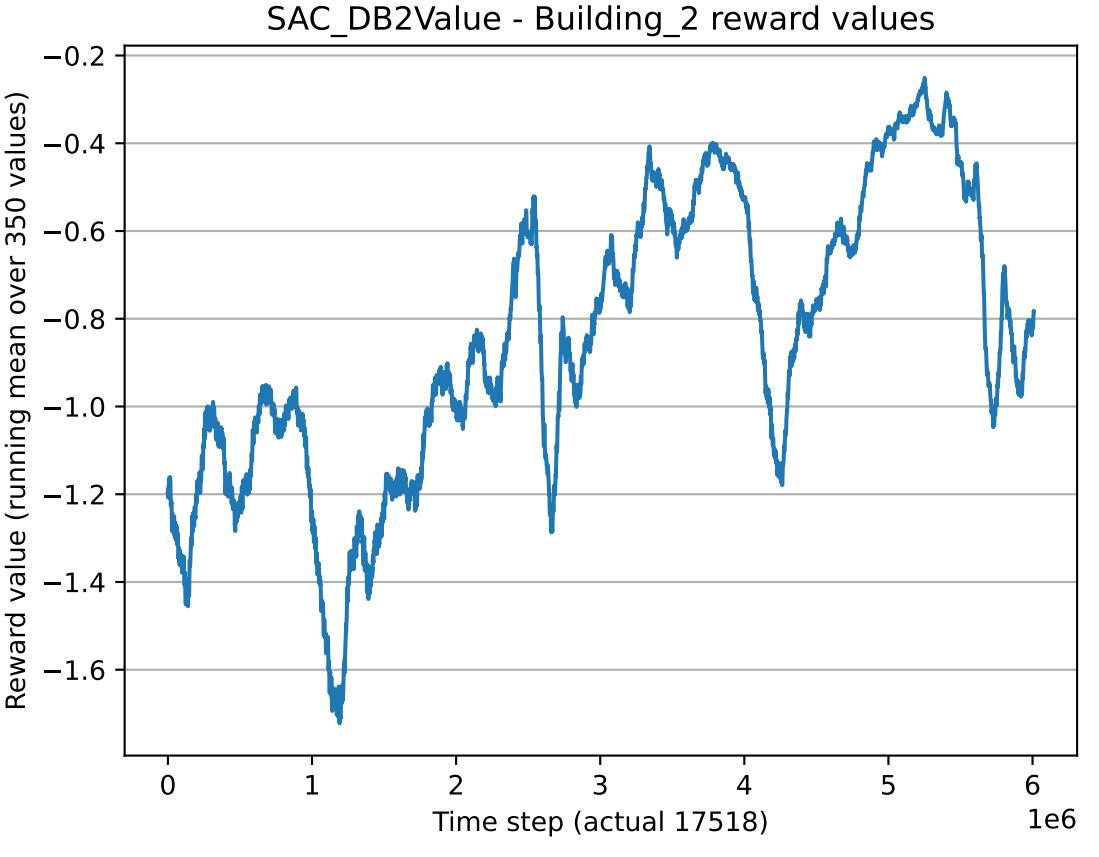
SAC_DB2Value - Building_4 loss values
Loss value
0
−200
−400
−600
−800
−1000
0
1000
2000
3000
4000
5000
Time step
q1_losses
q2_losses
policy_losses
alpha_losses

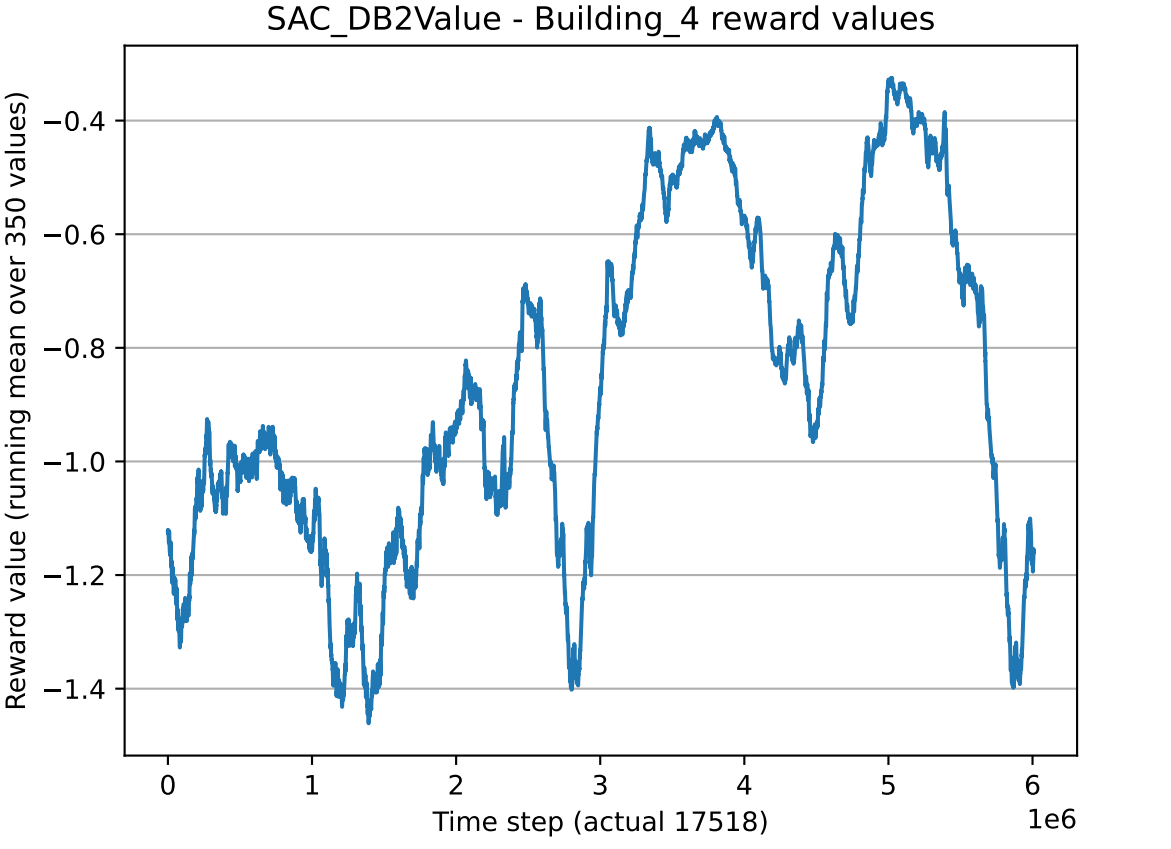

SAC_DB2Value - Building_6 loss values
Loss value
0
−200
−400
−600
−800
0
1000
2000
3000
4000
5000
Time step
q1_losses
q2_losses
policy_losses
alpha_losses

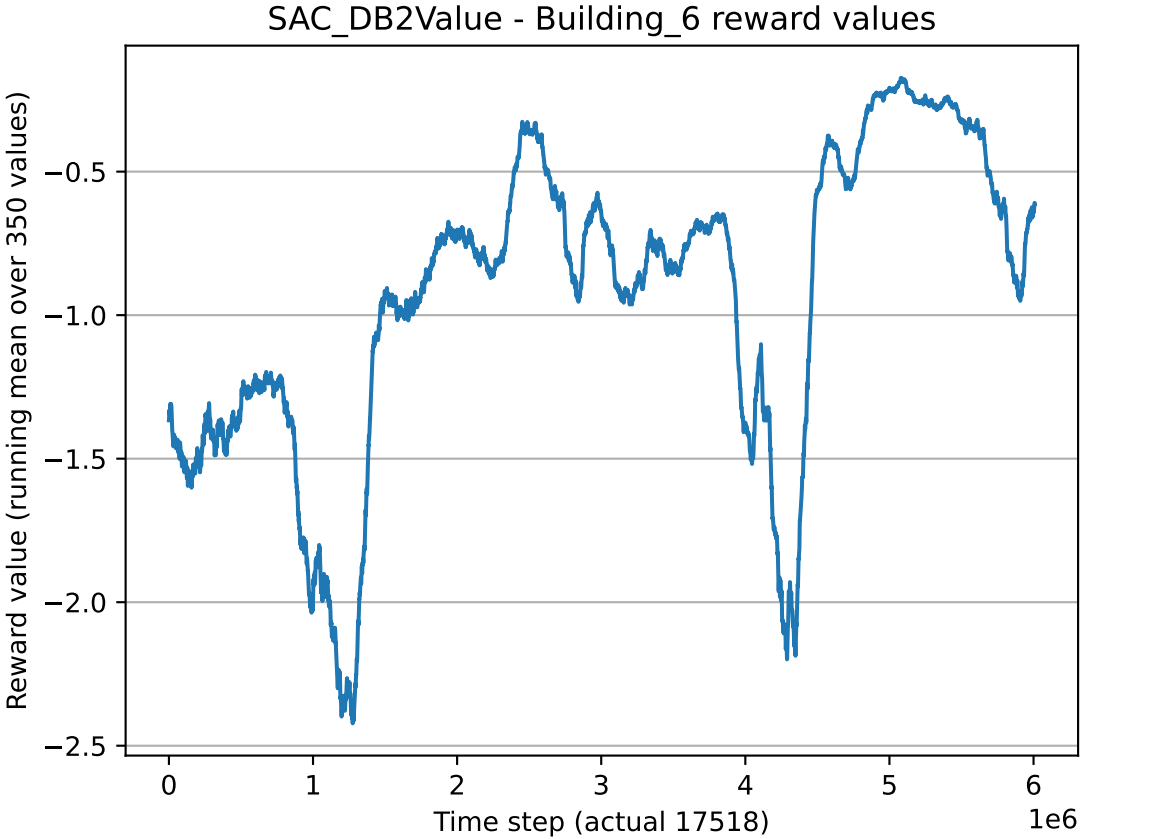

SAC_DB2Value - Building_9 loss values
Loss value
Time step
0
−200
−400
−600
−800
−1000
0
1000
2000
3000
4000
5000
q1_losses
q2_losses
policy_losses
alpha_losses

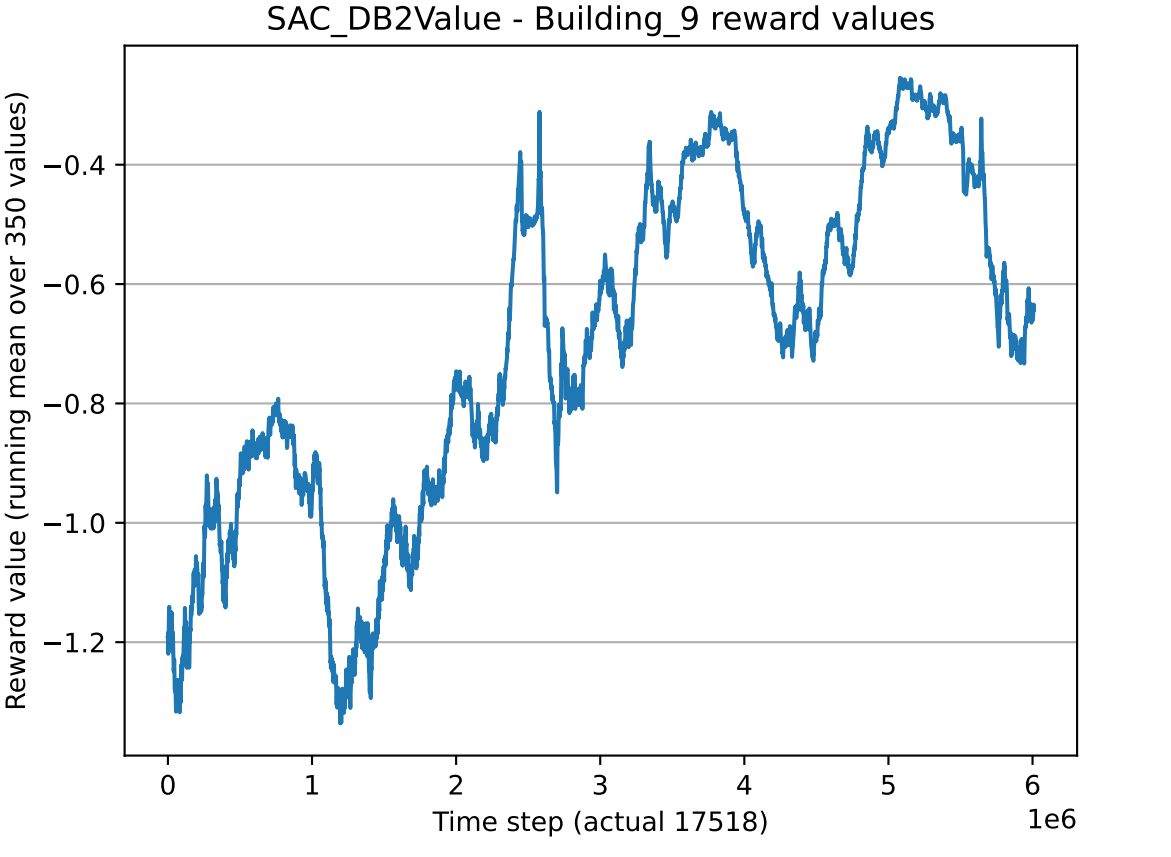

SAC_DB2Value - Building_14 loss values
Loss value
Time step
0
−200
−400
−600
−800
−1000
0
1000
2000
3000
4000
5000
q1_losses
q2_losses
policy_losses
alpha_losses

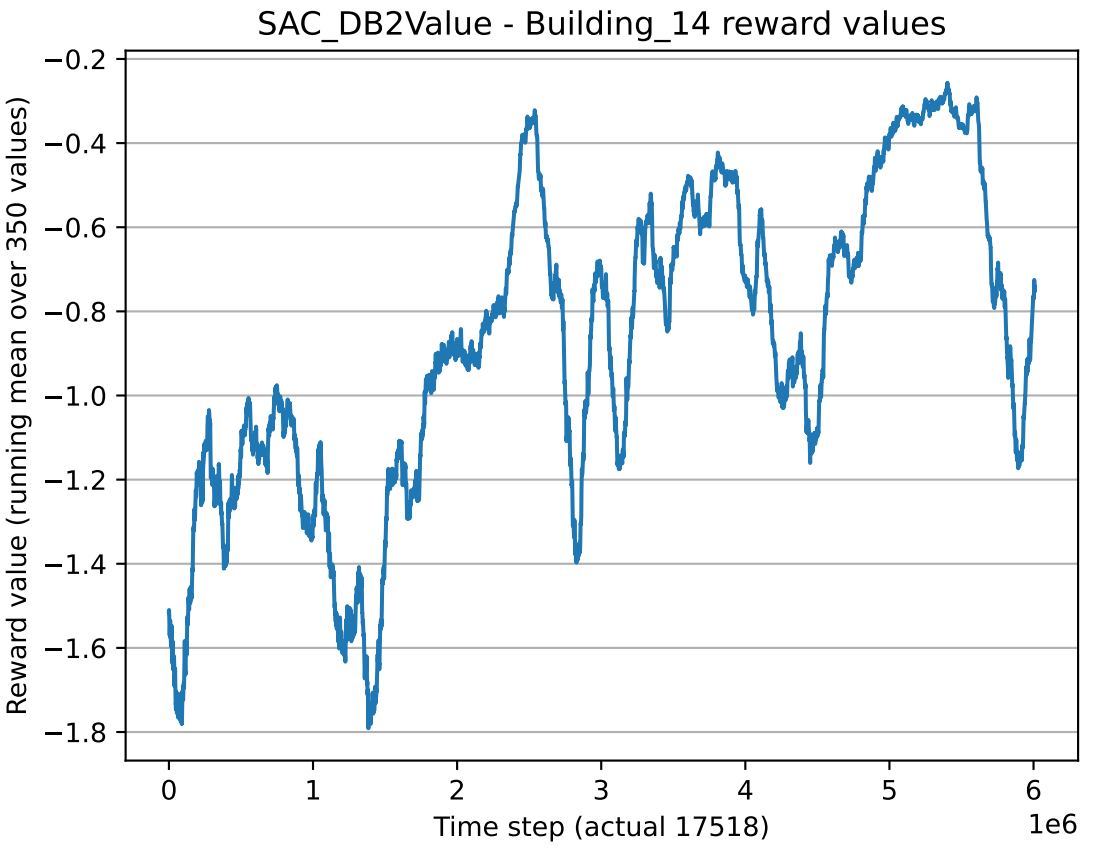

SAC_DB2Value - Building_1 reward values
Reward value (running mean over 350 values)
−0.4
−0.6
−0.8
−1.0
−1.2
−1.4
−1.6
0
1
2
3
4
5
6
Time step (actual 17518)
1e6

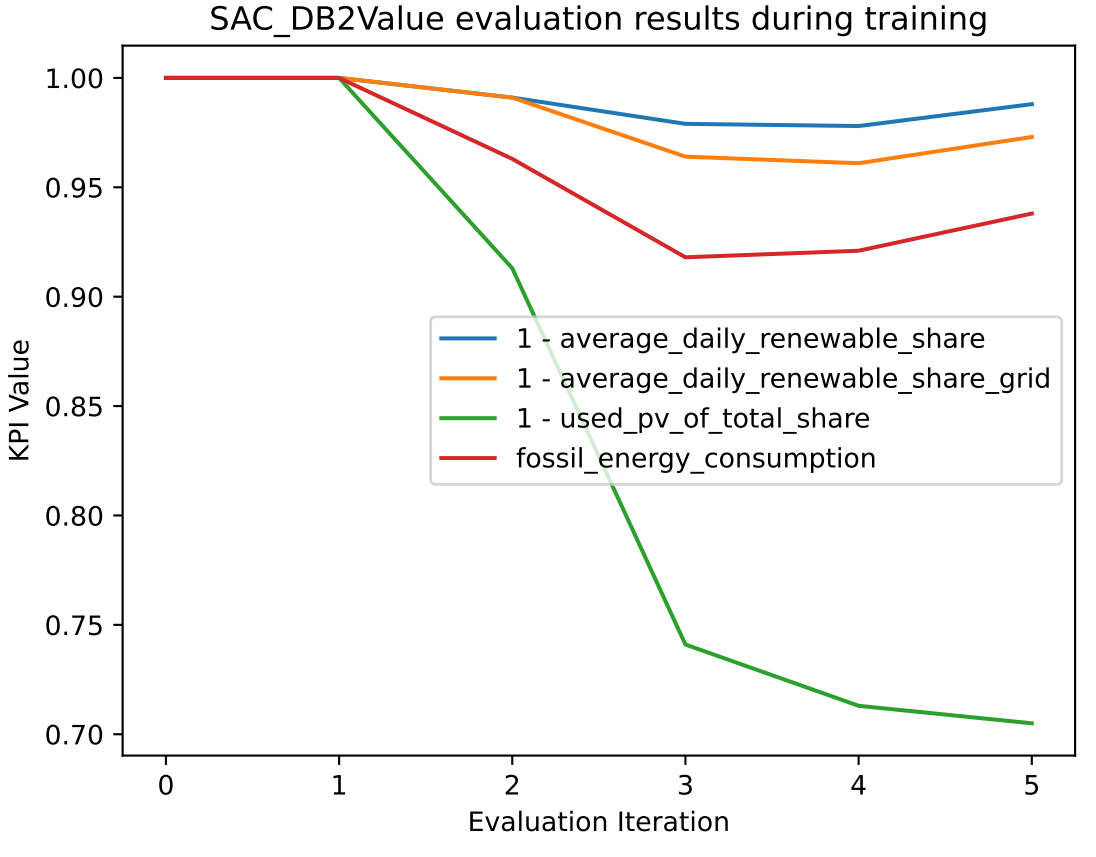

SAC_DB2Value - Building_2 reward values
Reward value (running mean over 350 values)
−0.2
−0.4
−0.6
−0.8
−1.0
−1.2
−1.4
−1.6
0
1
2
3
4
5
6
Time step (actual 17518)
1e6


SAC_DB2Value - Building_4 reward values
Reward value (running mean over 350 values)
−0.4
−0.6
−0.8
−1.0
−1.2
−1.4
0
1
2
3
4
5
6
Time step (actual 17518)
1e6


SAC_DB2Value - Building_6 reward values
Reward value (running mean over 350 values)
−0.5
−1.0
−1.5
−2.0
−2.5
0
1
2
3
4
5
6
Time step (actual 17518)
1e6


SAC_DB2Value - Building_9 reward values
Reward value (running mean over 350 values)
−0.4
−0.6
−0.8
−1.0
−1.2
0
1
2
3
4
5
6
Time step (actual 17518)
1e6


SAC_DB2Value - Building_14 reward values
Reward value (running mean over 350 values)
−0.2
−0.4
−0.6
−0.8
−1.0
−1.2
−1.4
−1.6
−1.8
0
1
2
3
4
5
6
Time step (actual 17518)
1e6


SAC_DB2Value evaluation results during training
1.00
0.95
0.90
0.85
0.80
0.75
0.70
KPI Value
0
1
2
3
4
5
Evaluation Iteration
1 - average_daily_renewable_share
1 - average_daily_renewable_share_grid
1 - used_pv_of_total_share
fossil_energy_consumption