Phase II, Scenario 3 Base Hourly Generation Dispatch Plots

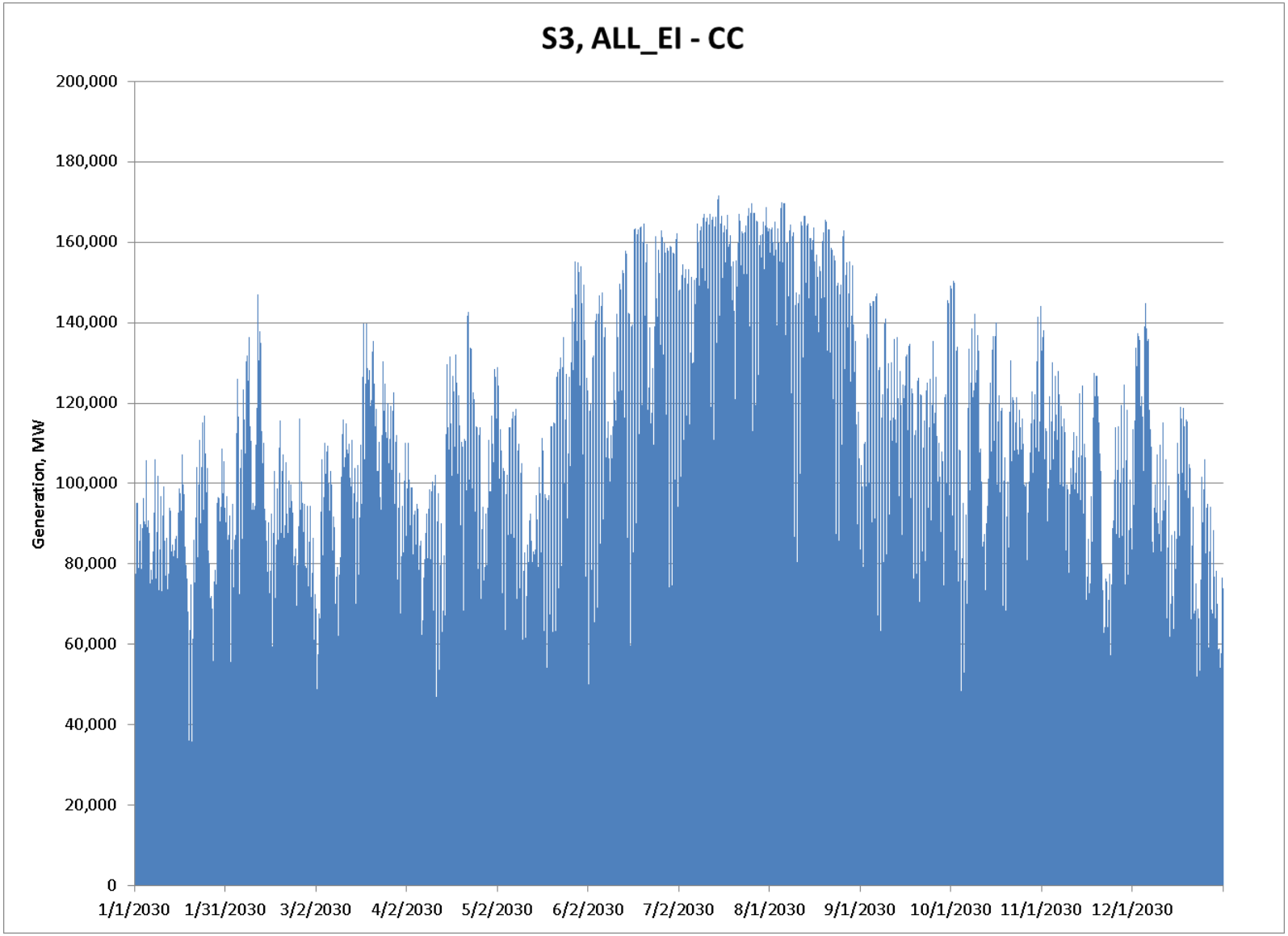
- "The results presented herein use modeling assumptions developed by EIPC, EIPC stakeholders and CRA for purposes of EIPC capacity expansion modeling. As such, these results do not necessarily reflect the opinions or views of CRA or any individual EIPC stakeholder."

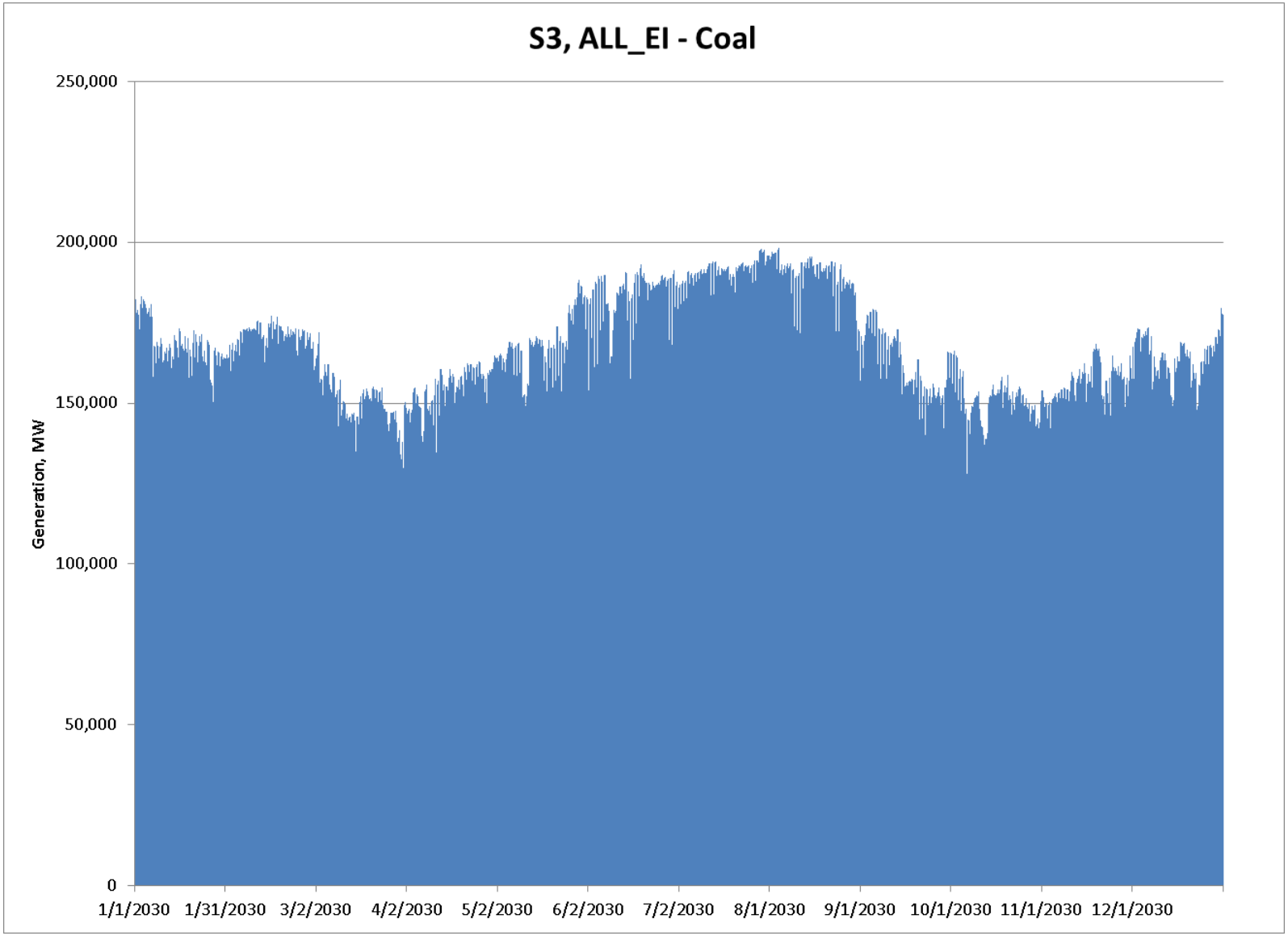
- The following data file was used to create the hourly generation dispatch plots.
  - Scen 3 E Hourly Trans Report_V2 (10-01-12)
  - http://www.eipconline.com/uploads/20121001_S3_Base_E_Hourly_TransReport_V2.xlsx

- Three series of hourly generation dispatch plots
  - Generation Type for each generation grouping type (9 plots)
  - Megawatt (MW) for each NEEM region and total (25 plots)
  - Percent (%) for each NEEM region and total (25 plots)

Generation Type

- 9 plots, one for each generation grouping type


S3, ALL_EI - CC
Generation, MW
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
8/1/2030
9/1/2030
10/1/2030
11/1/2030
12/1/2030


S3, ALL_EI - Coal
250,000
200,000
150,000
100,000
50,000
0
Generation, MW
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
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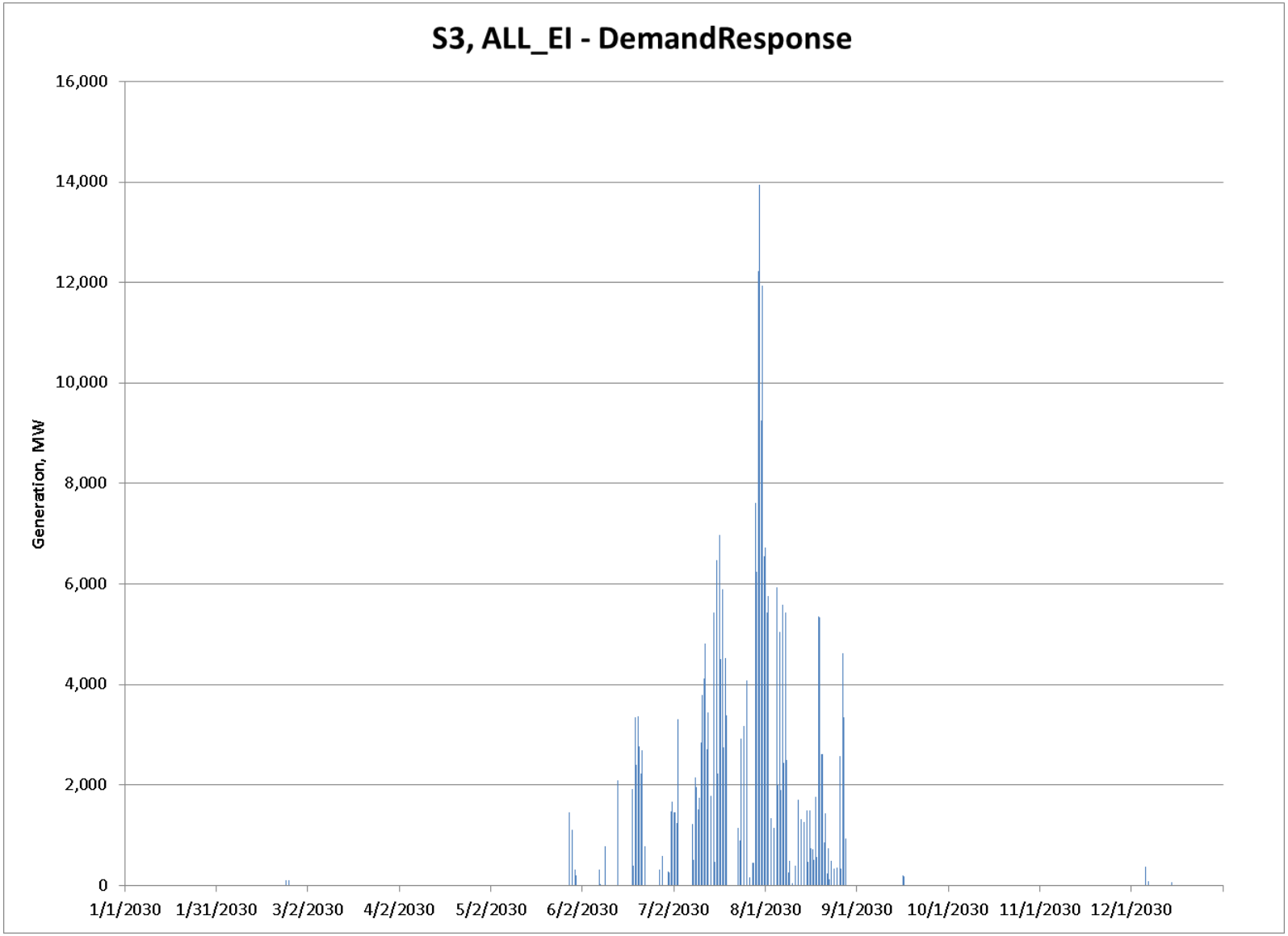
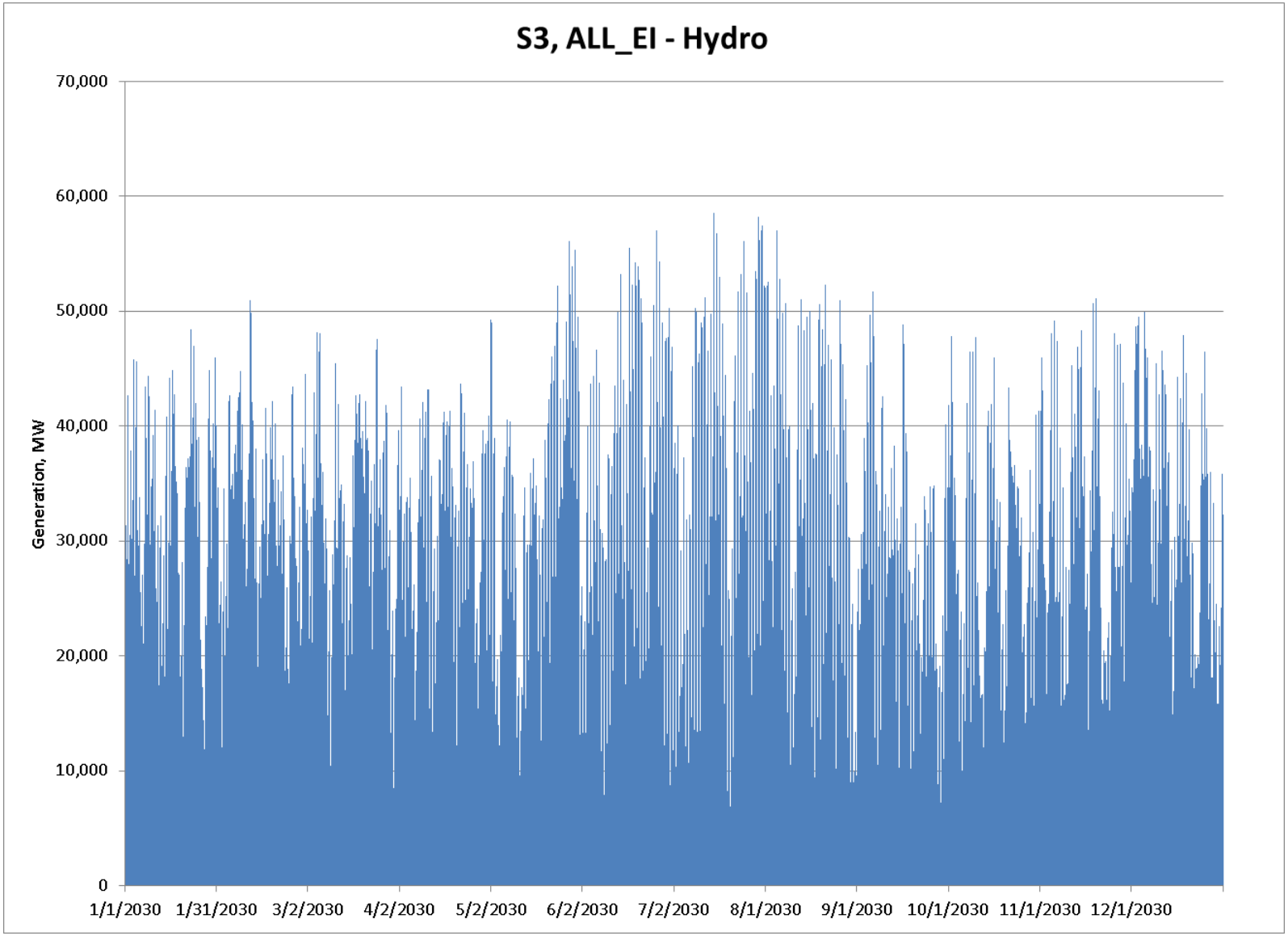
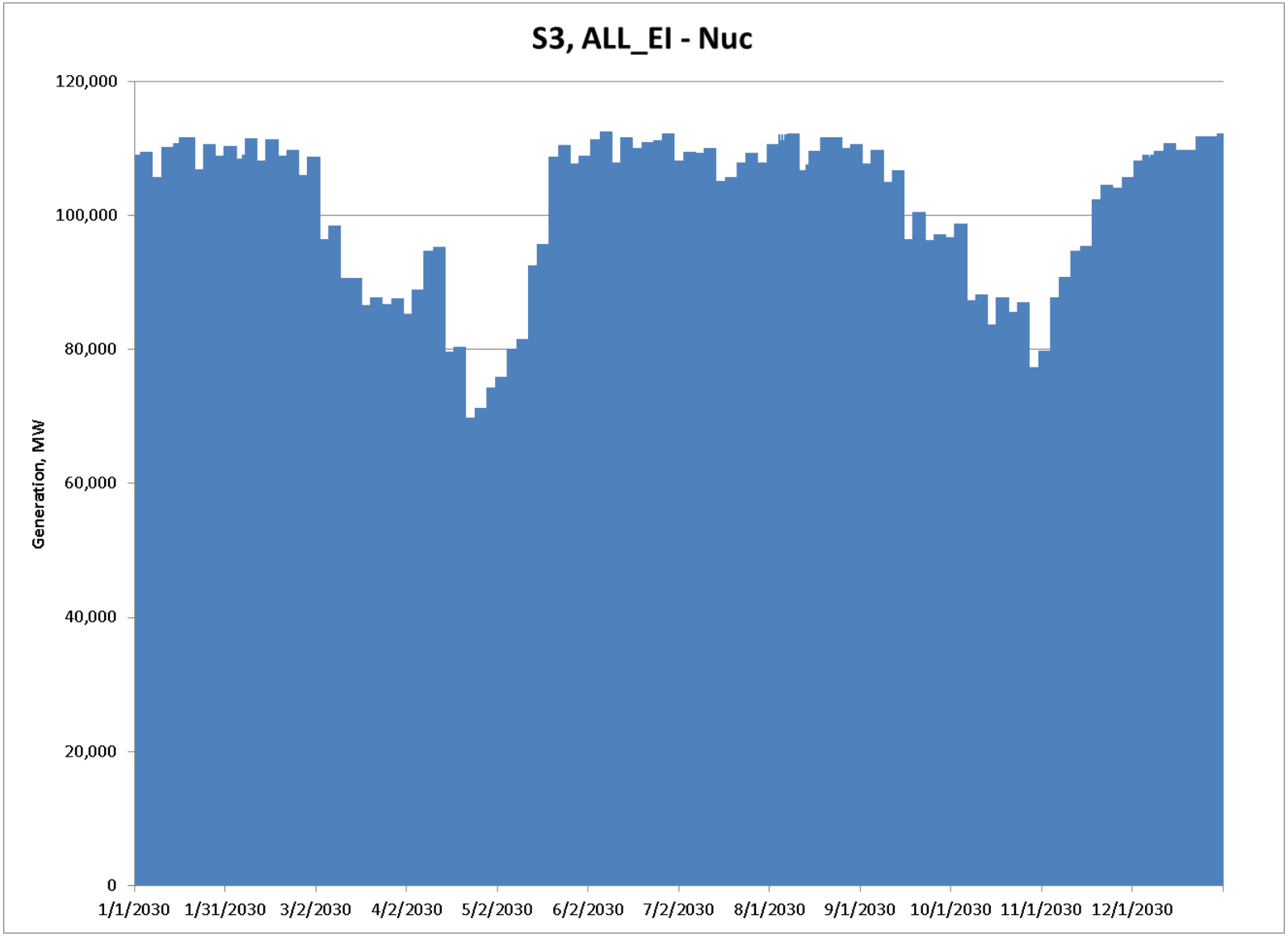
12/1/2030


S3, ALL_EI - DemandResponse
Generation, MW
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
8/1/2030
9/1/2030
10/1/2030
11/1/2030
12/1/2030


S3, ALL_EI - Hydro
Generation, MW
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
8/1/2030
9/1/2030
10/1/2030
11/1/2030
12/1/2030


S3, ALL_EI - Nuc
120,000
100,000
80,000
60,000
40,000
20,000
0
Generation, MW
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
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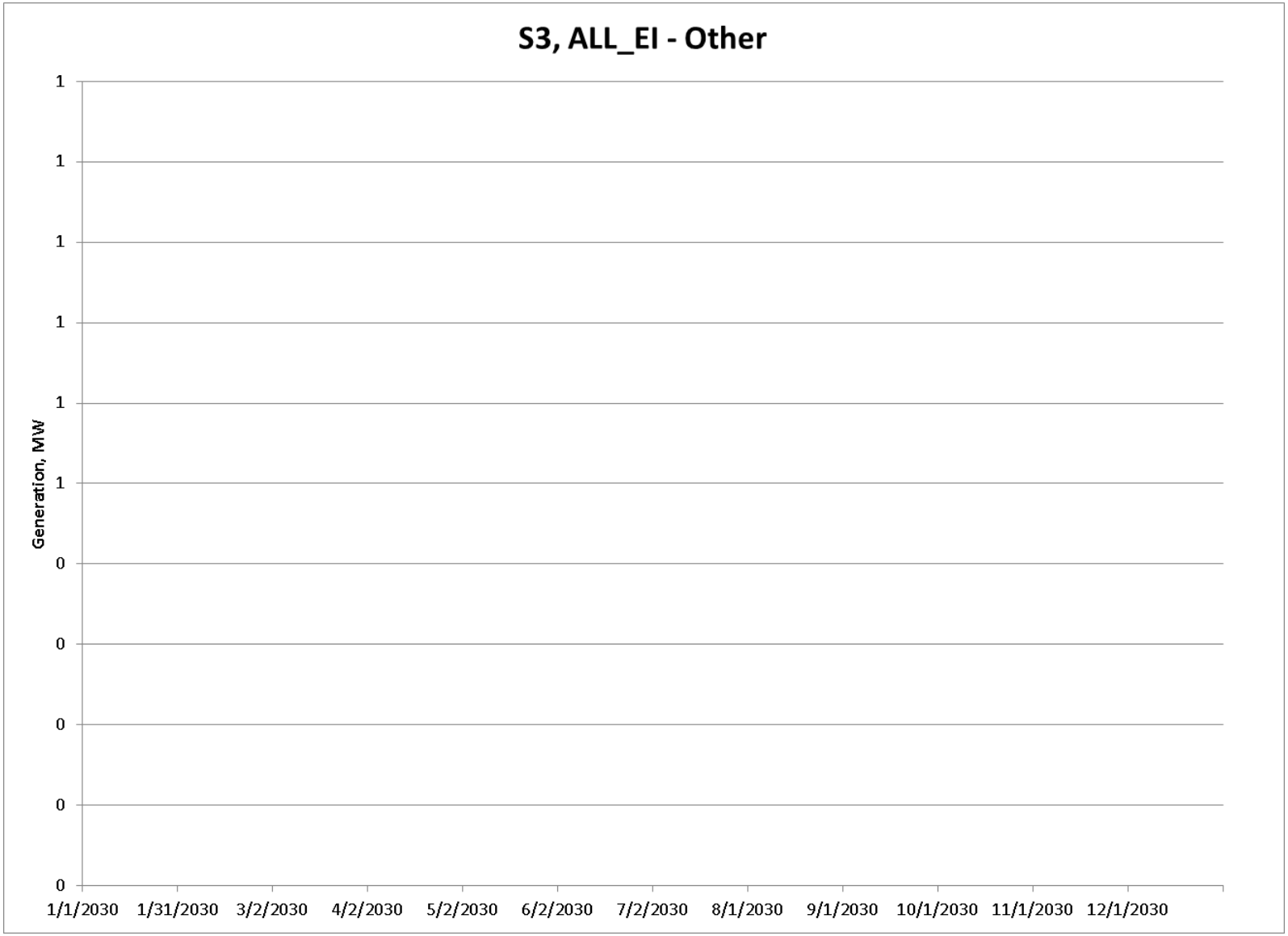
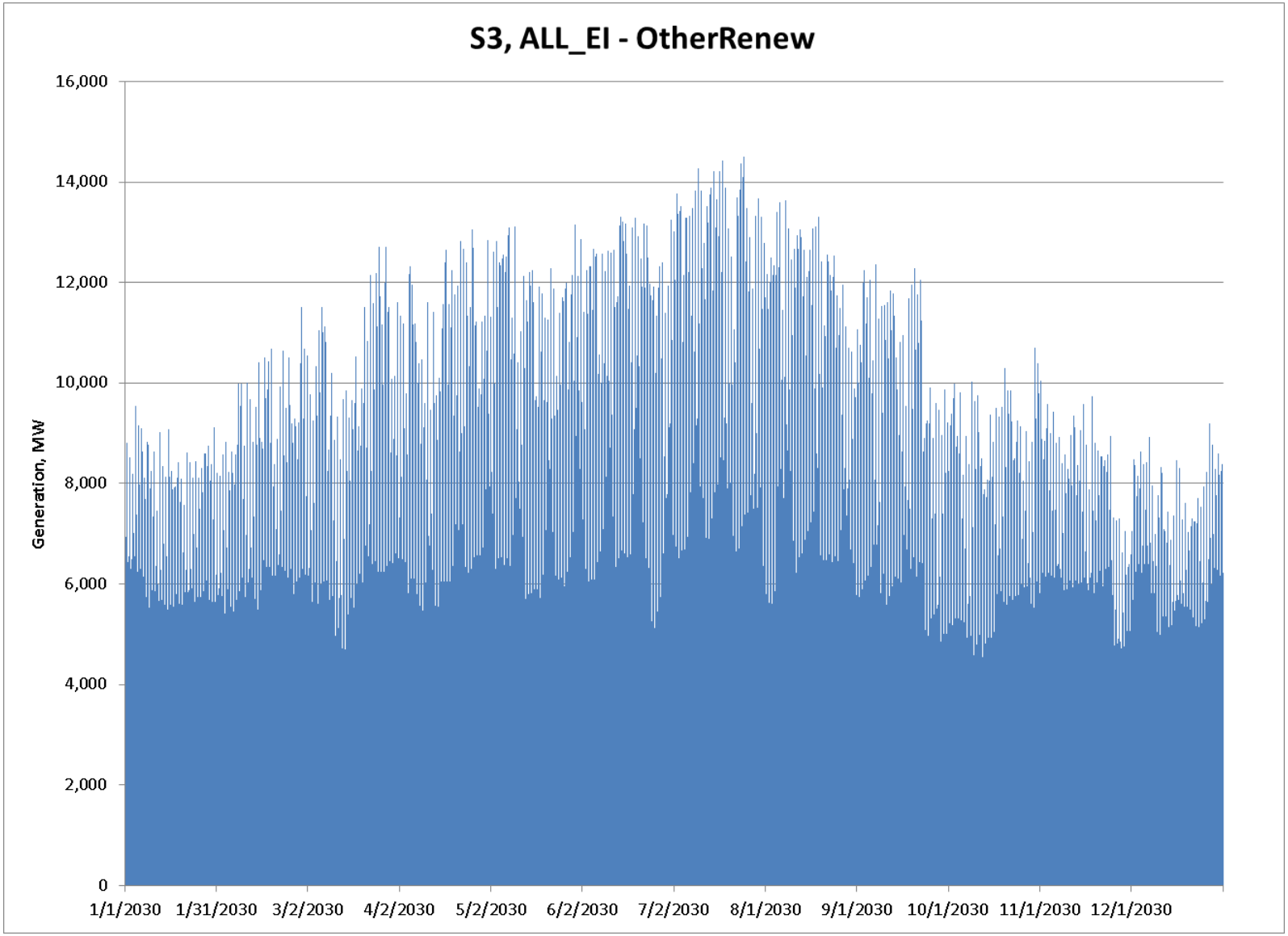
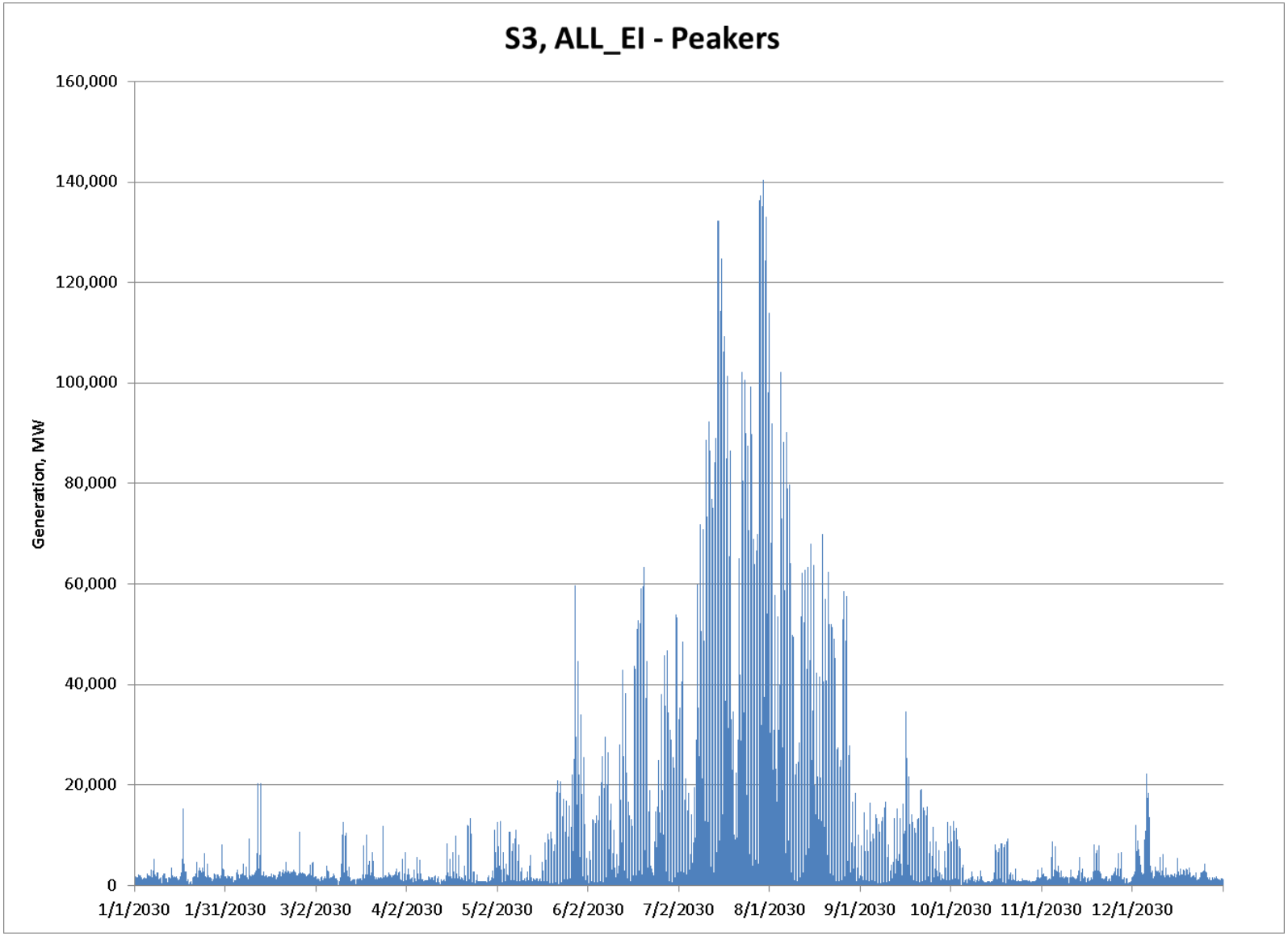
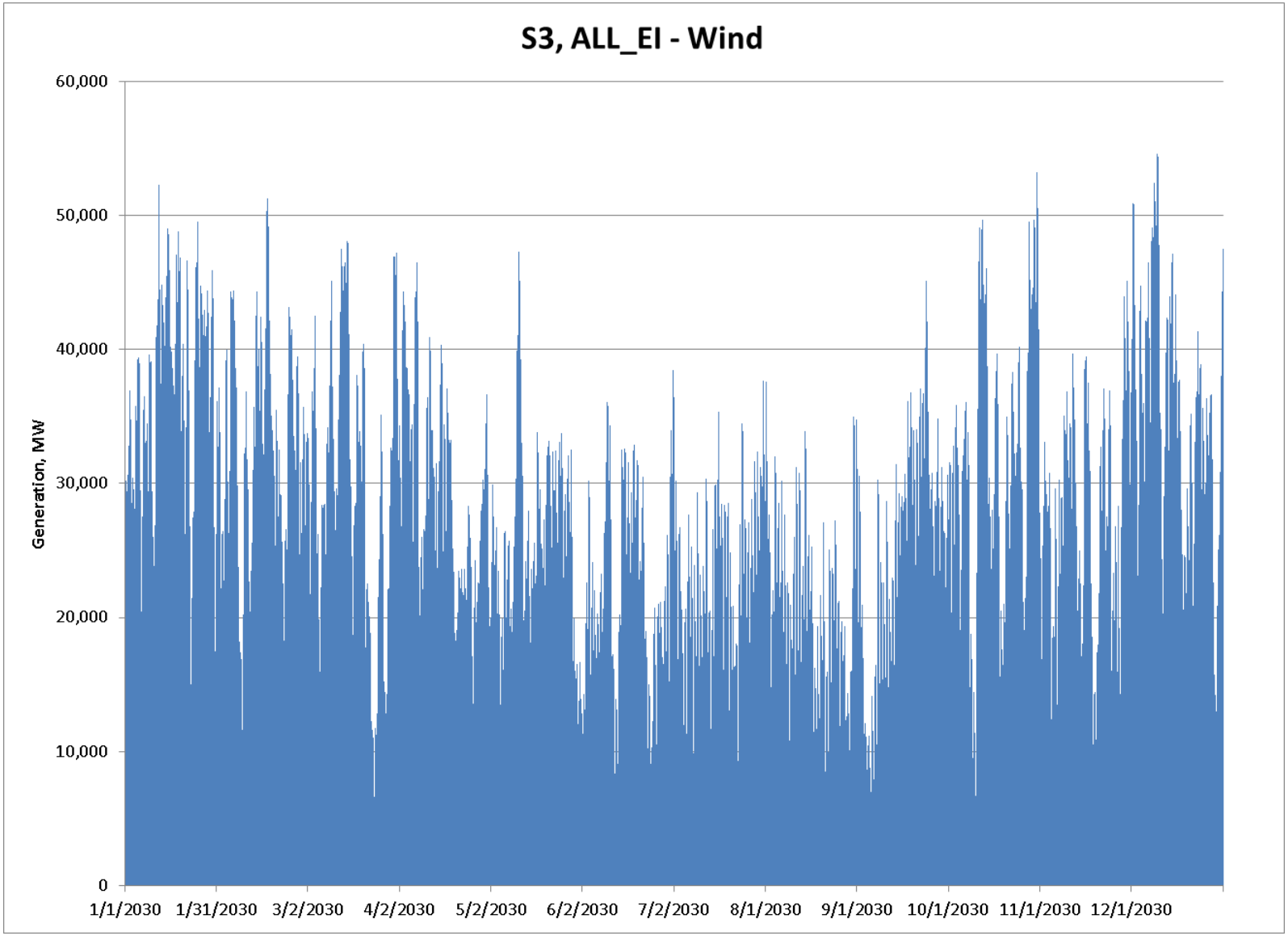
11/1/2030
12/1/2030


S3, ALL_EI - Other
Generation, MW
1
1
1
1
1
1
0
0
0
0
0
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
8/1/2030
9/1/2030
10/1/2030
11/1/2030
12/1/2030

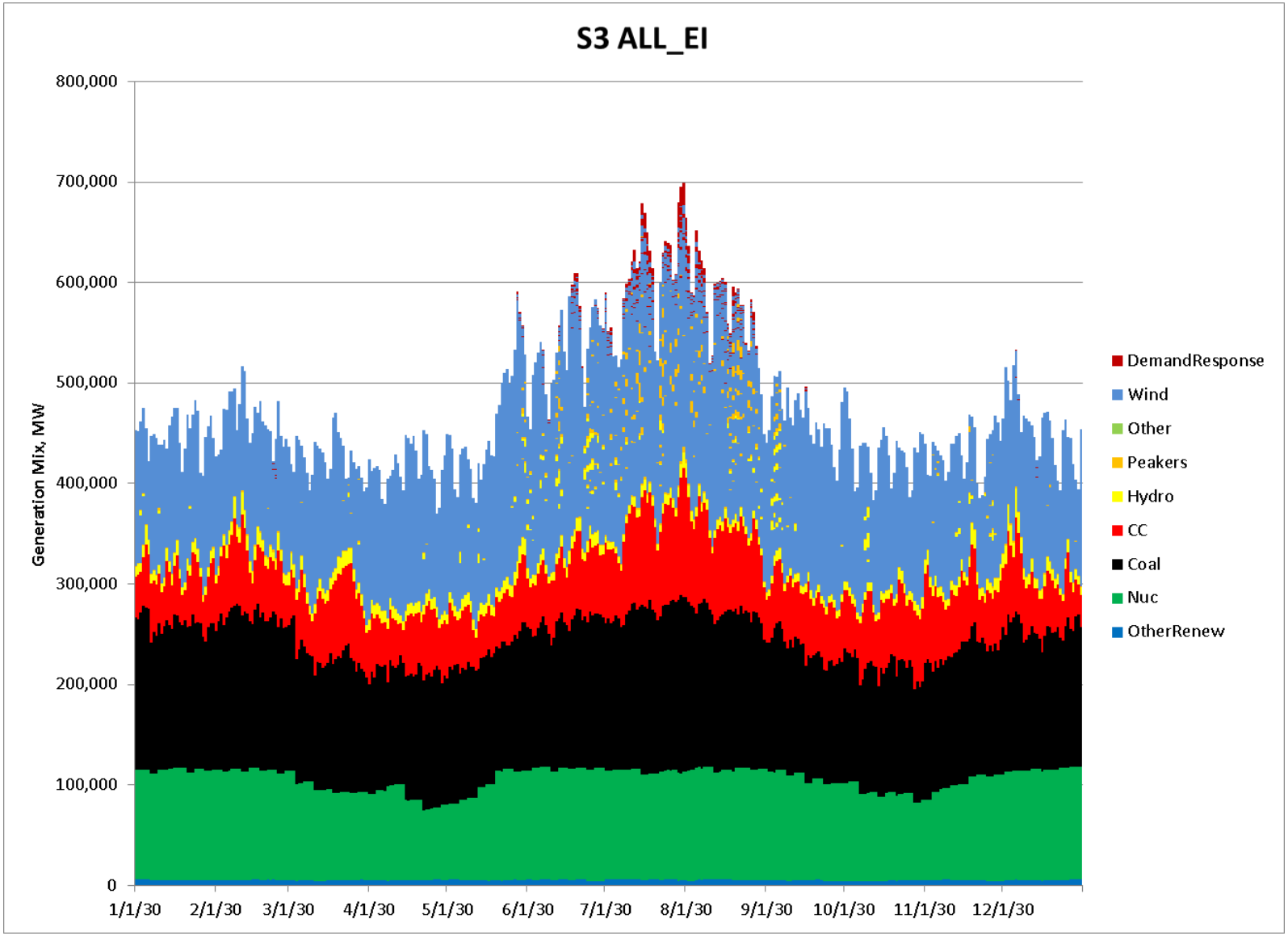

S3, ALL_EI - OtherRenew
Generation, MW
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
8/1/2030
9/1/2030
10/1/2030
11/1/2030
12/1/2030

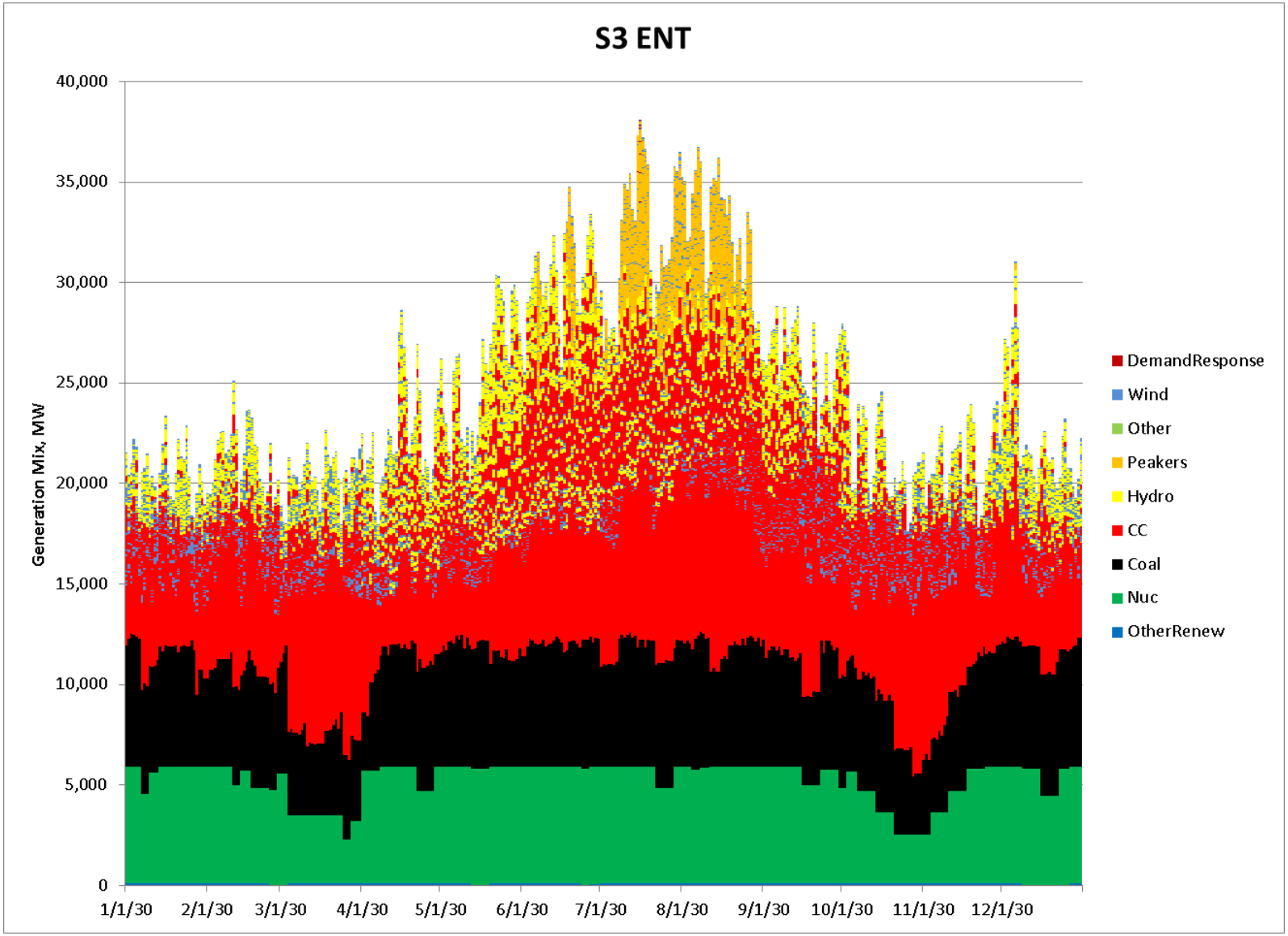

S3, ALL_EI - Peakers
Generation, MW
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
8/1/2030
9/1/2030
10/1/2030
11/1/2030
12/1/2030

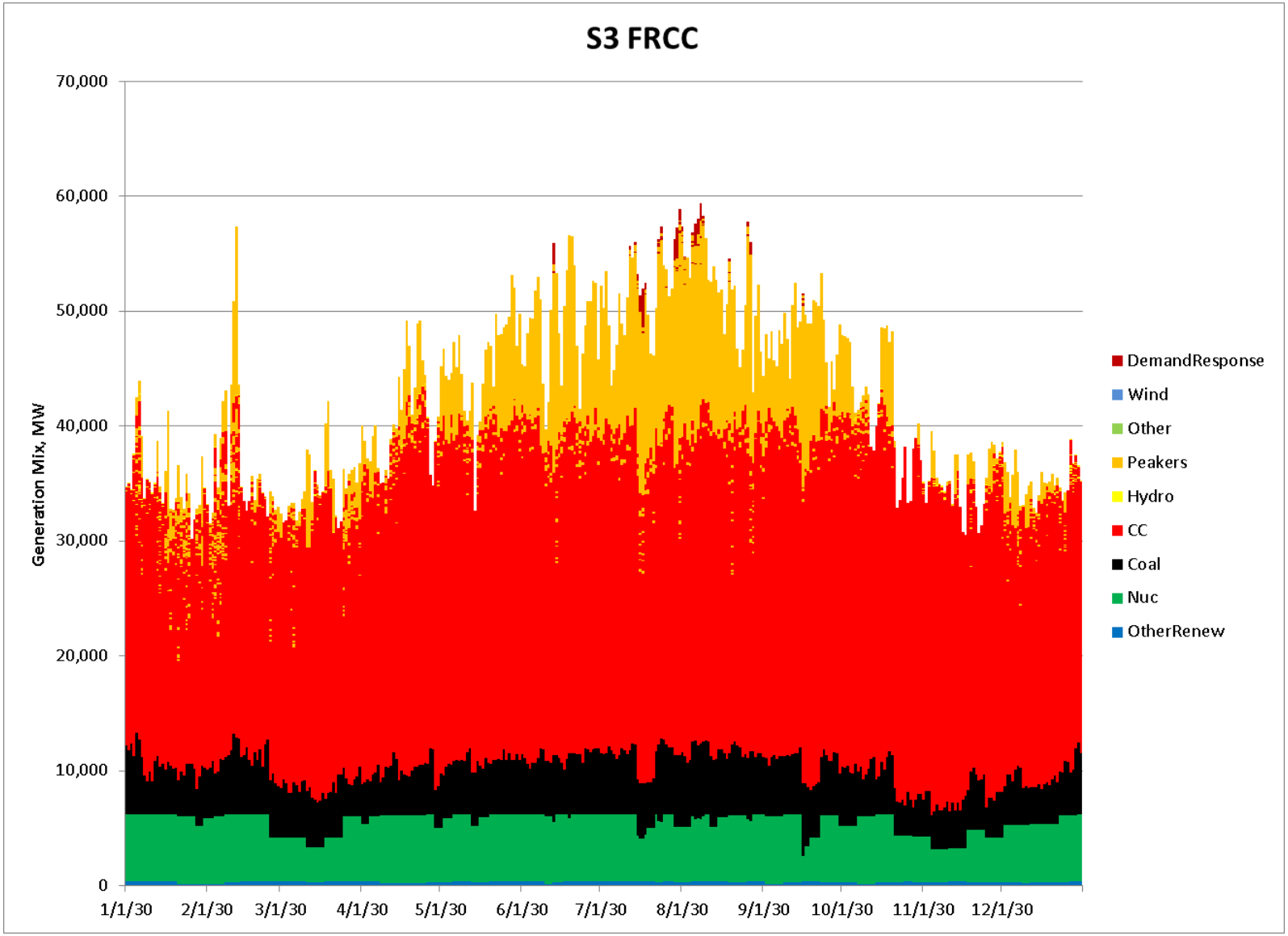

S3, ALL_EI - Wind
Generation, MW
60,000
50,000
40,000
30,000
20,000
10,000
0
1/1/2030
1/31/2030
3/2/2030
4/2/2030
5/2/2030
6/2/2030
7/2/2030
8/1/2030
9/1/2030
10/1/2030
11/1/2030
12/1/2030

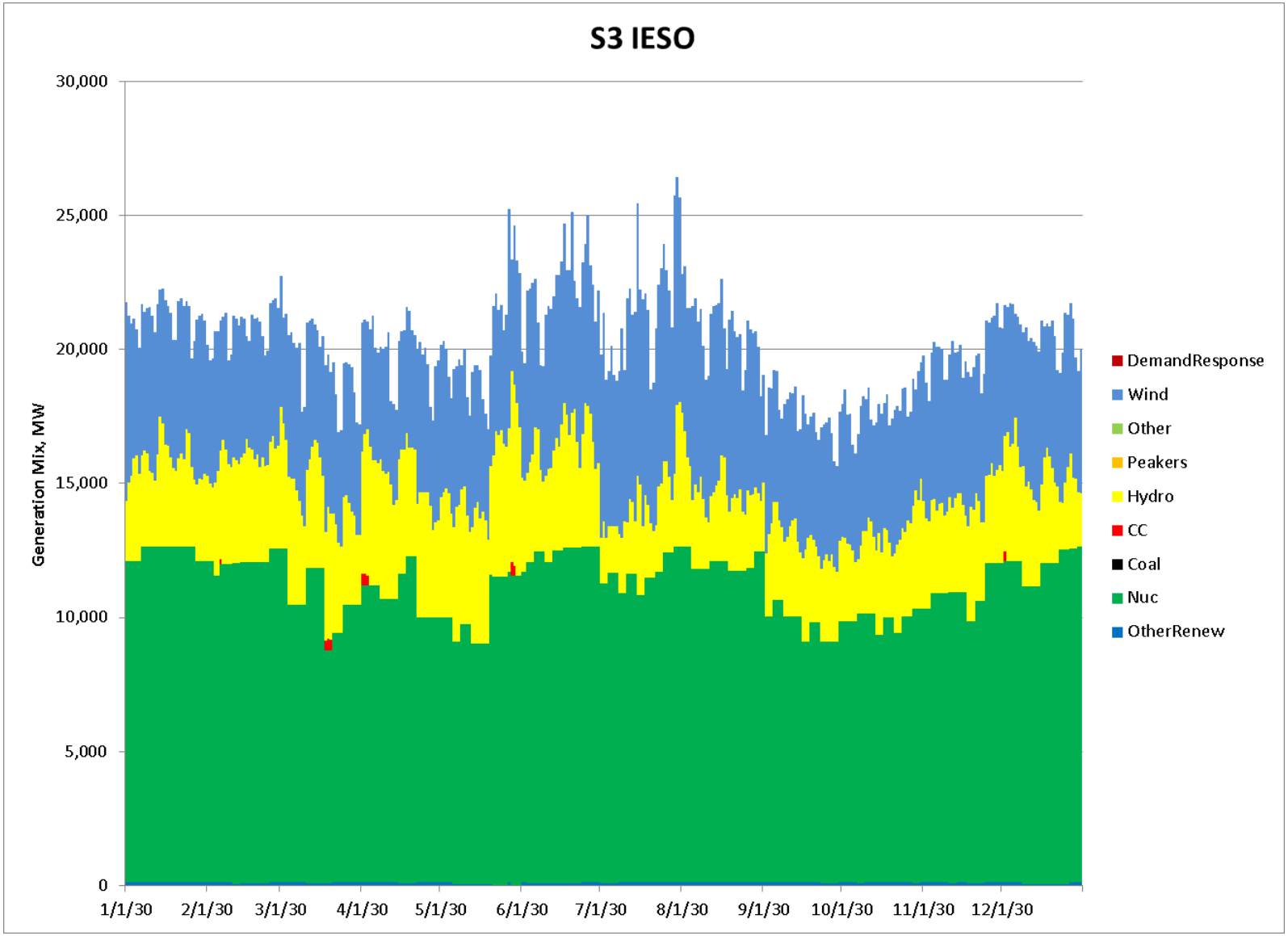
Megawatt (MW)

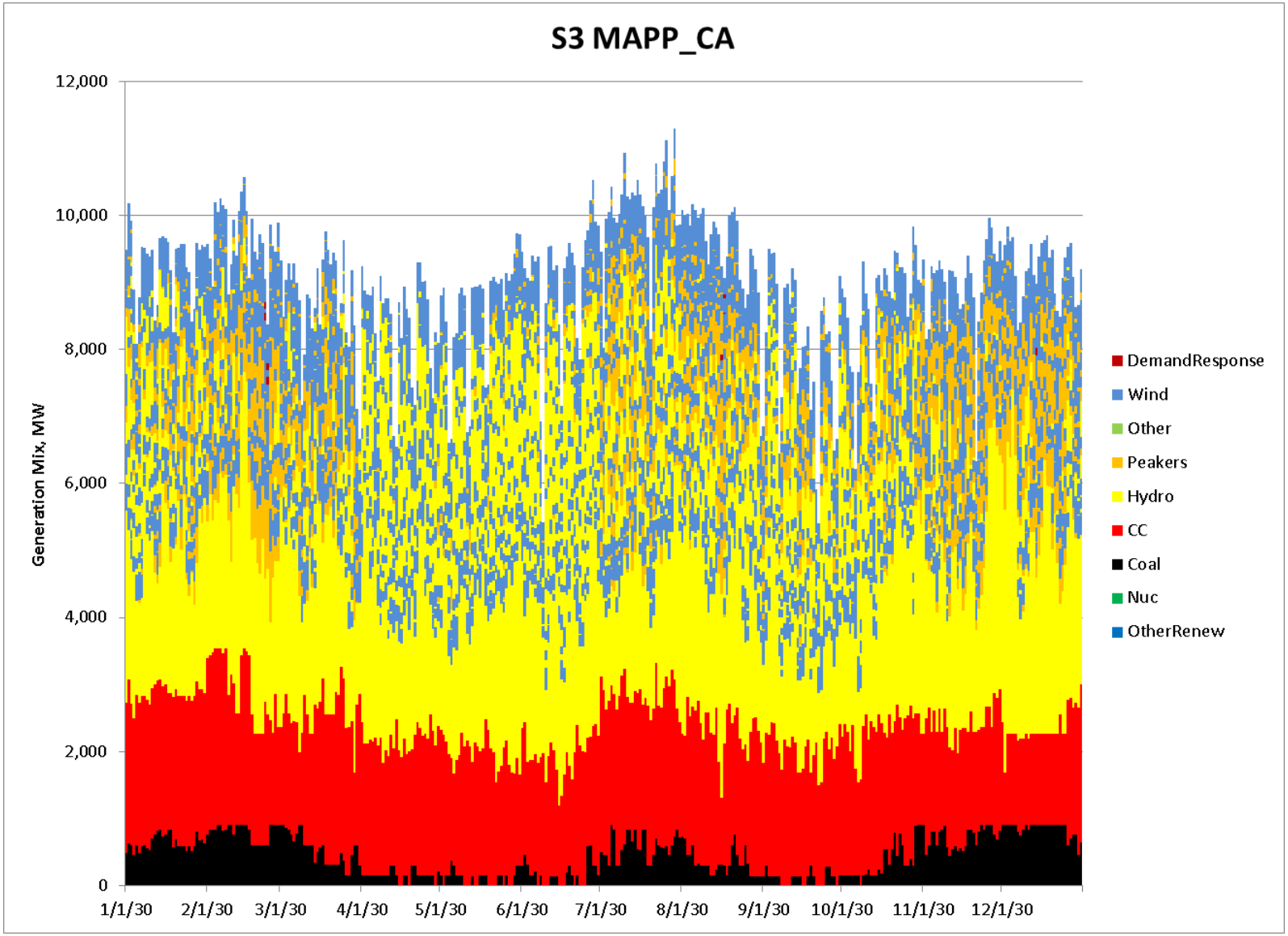
- 25 plots, one for each NEEM region and total

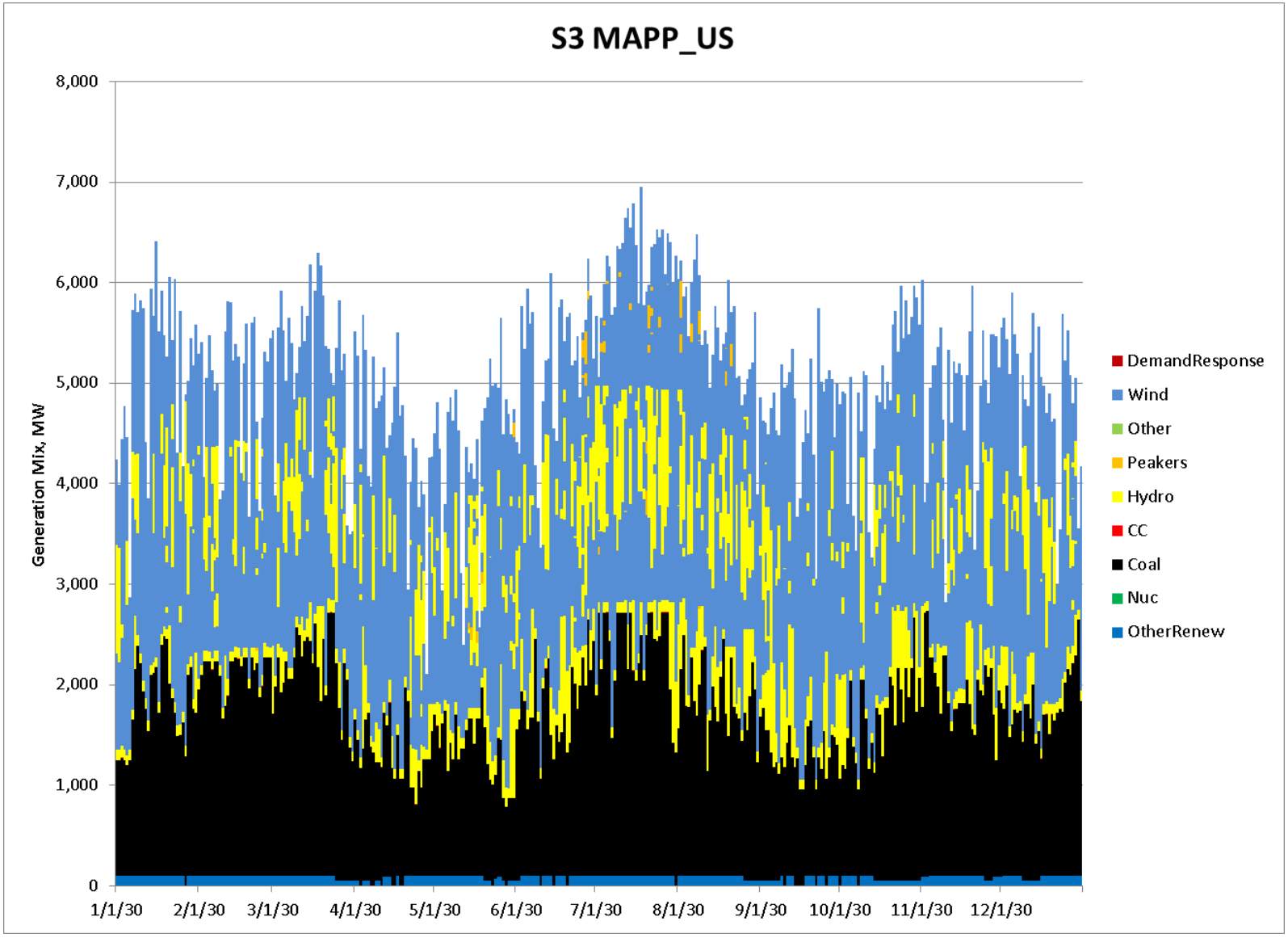

S3 ALL_EI
Generation Mix, MW
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

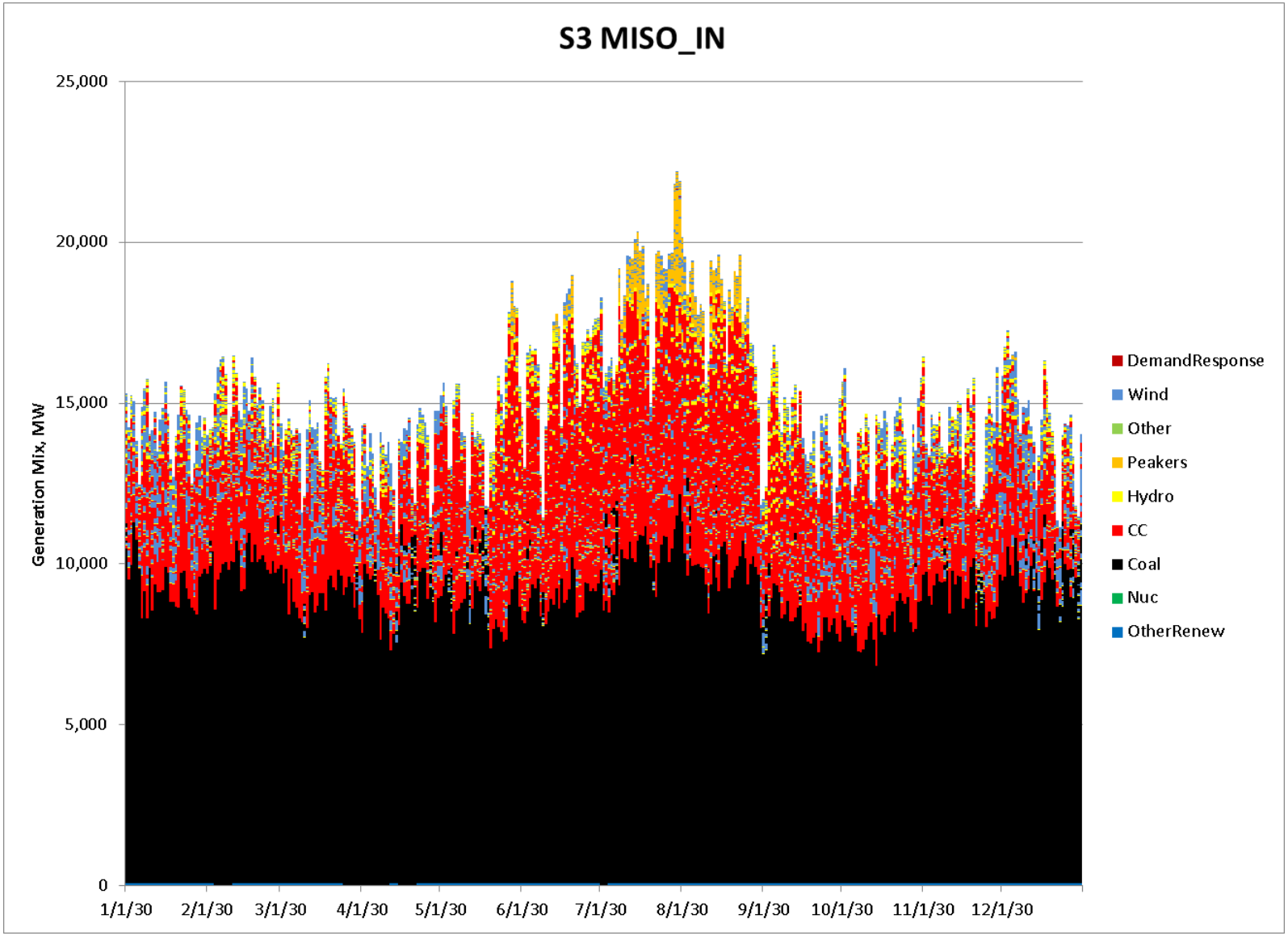

S3 ENT
Generation Mix, MW
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

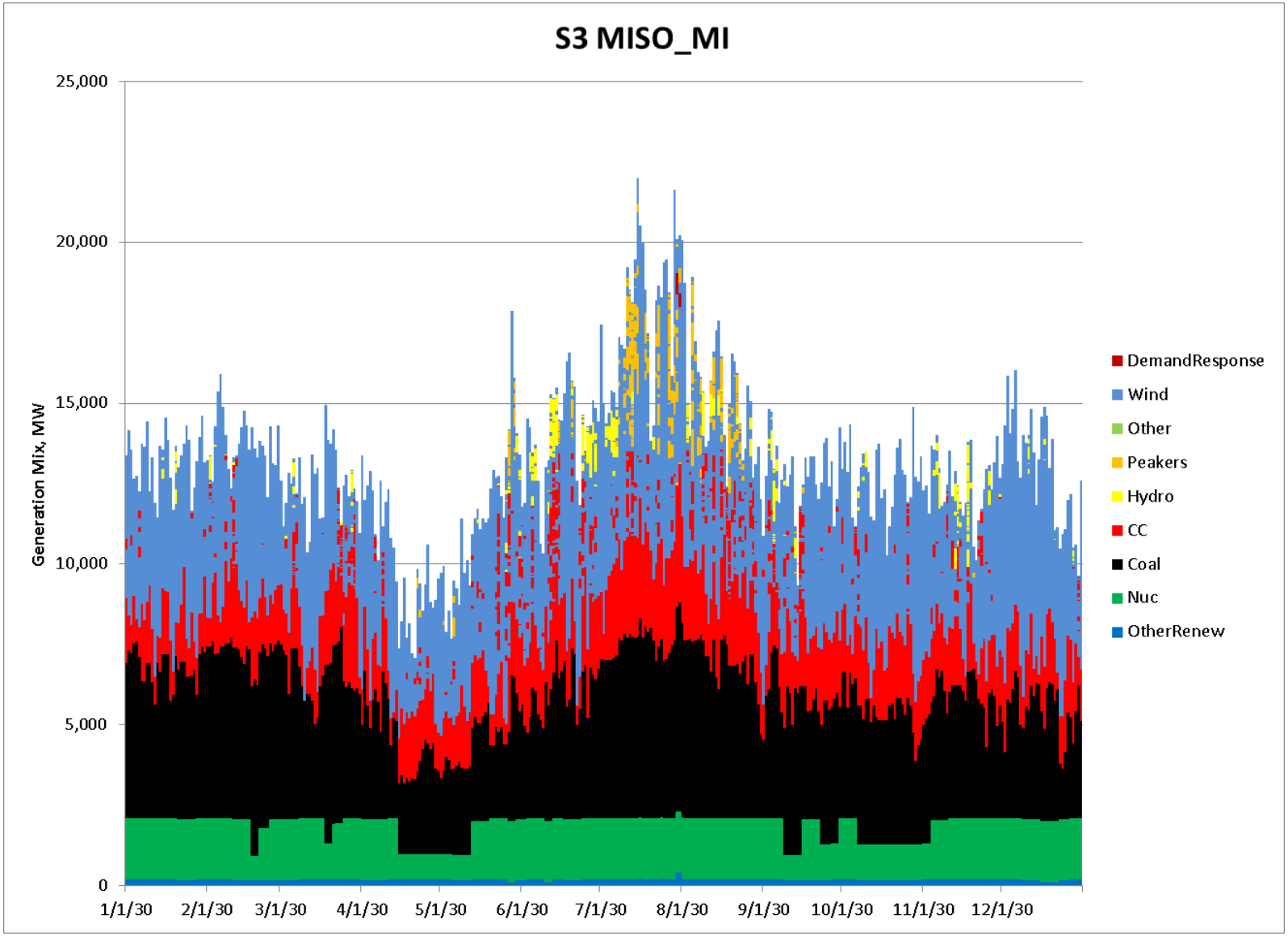

S3 FRCC
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Generation Mix, MW
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

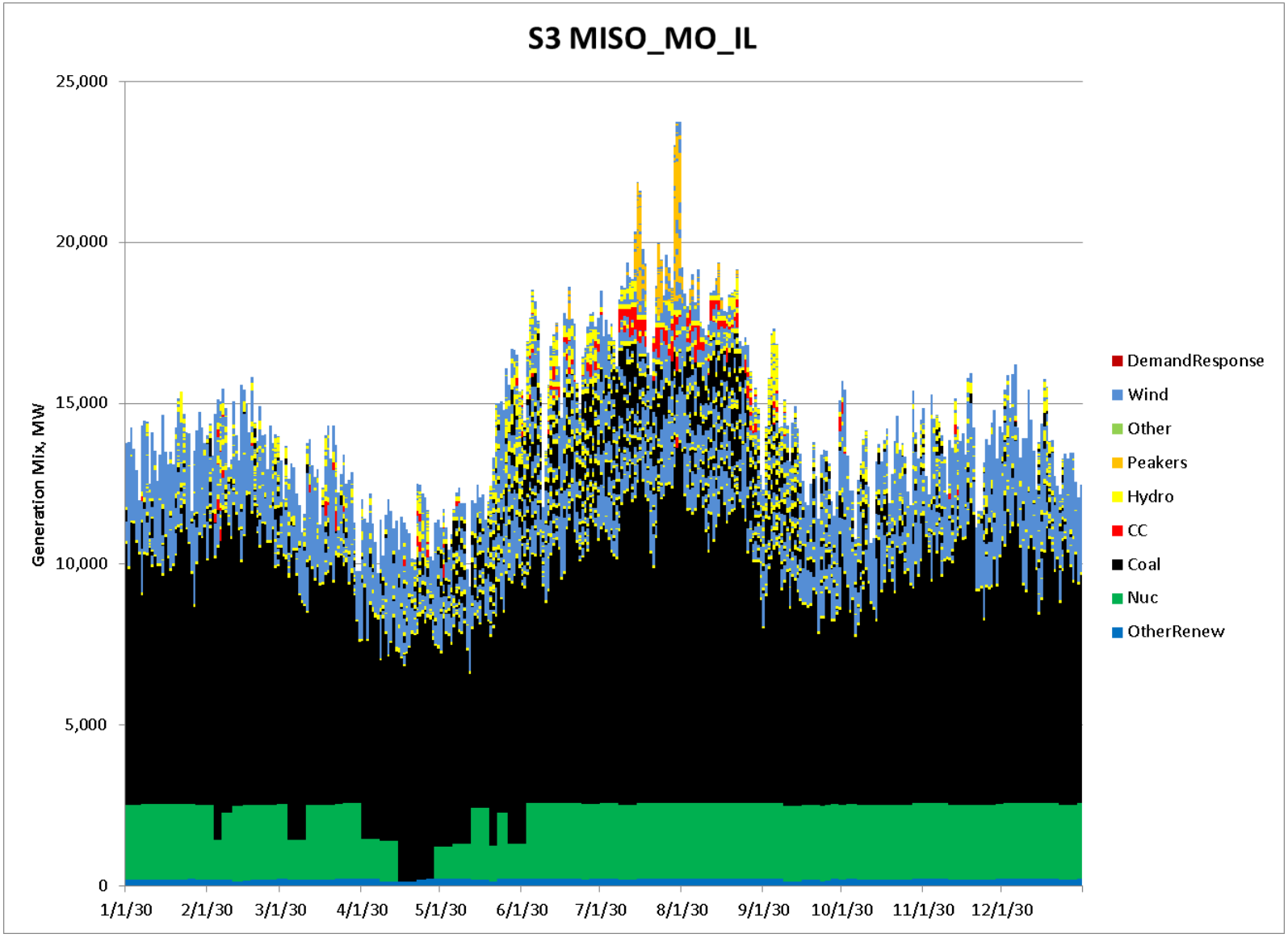

S3 IESO
30,000
25,000
20,000
15,000
10,000
5,000
0
Generation Mix, MW
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

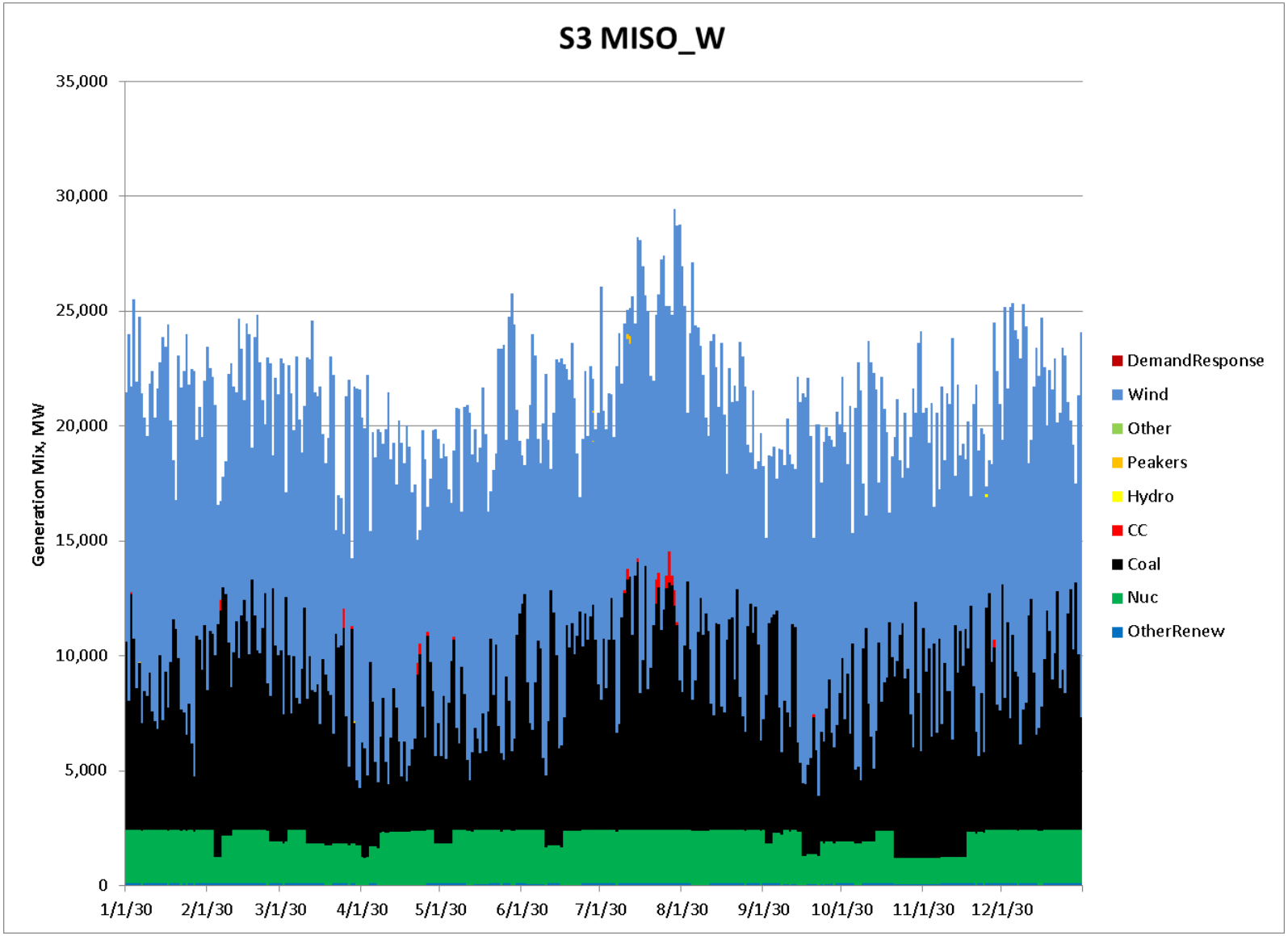

S3 MAPP_CA
Generation Mix, MW
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

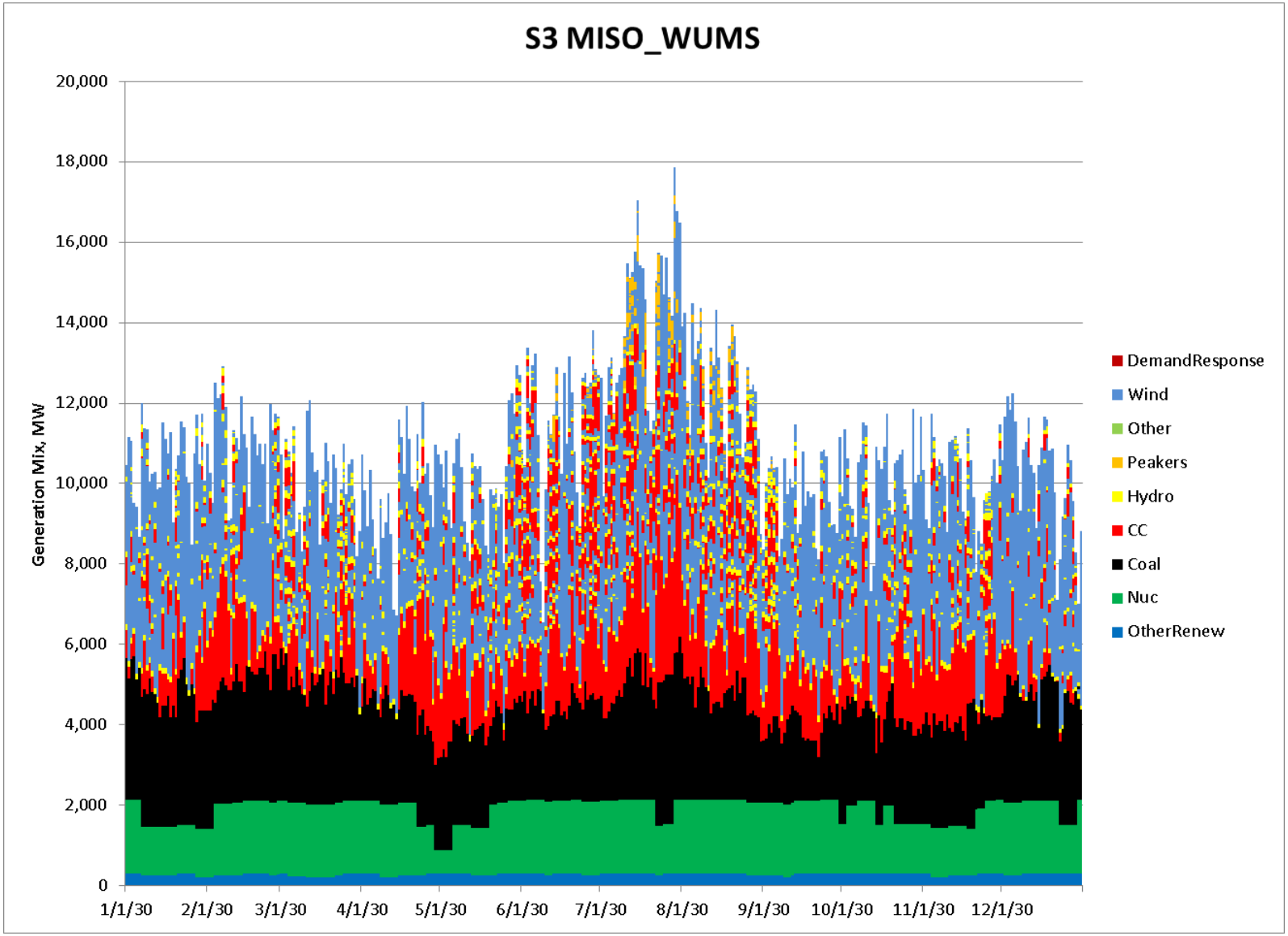

S3 MAPP_US
Generation Mix, MW
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

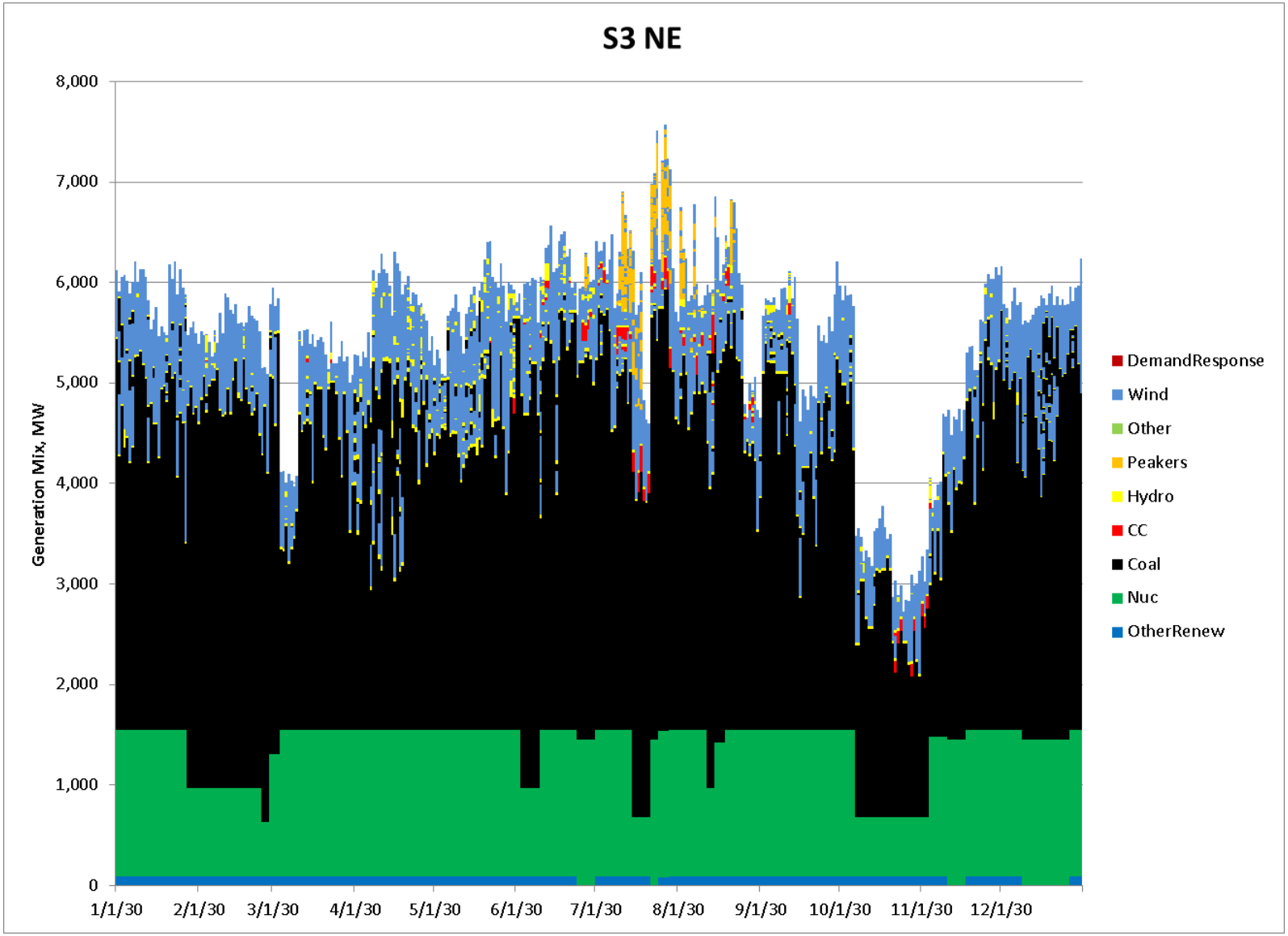

S3 MISO_IN
Generation Mix, MW
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

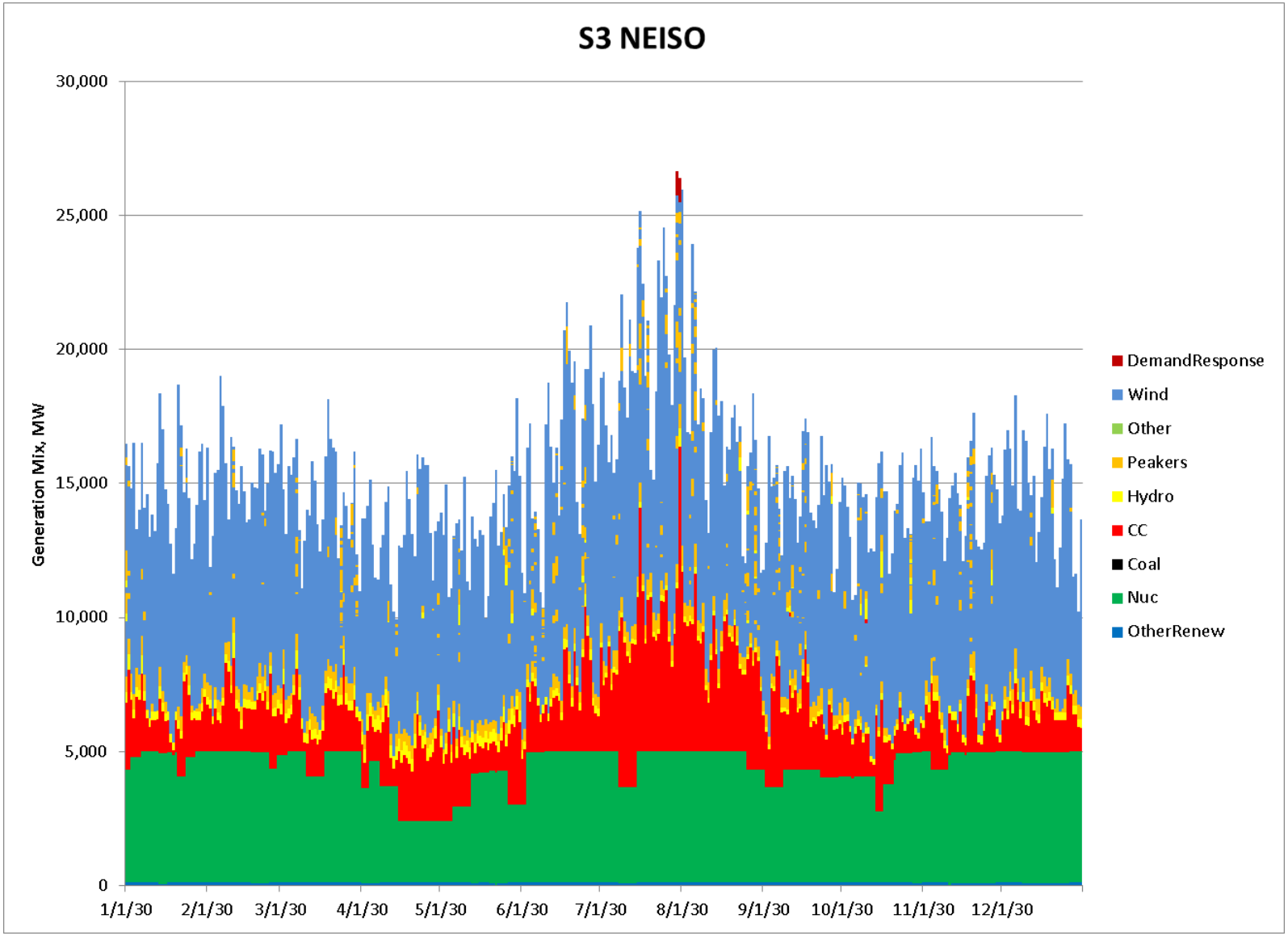

S3 MISO_MI
Generation Mix, MW
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

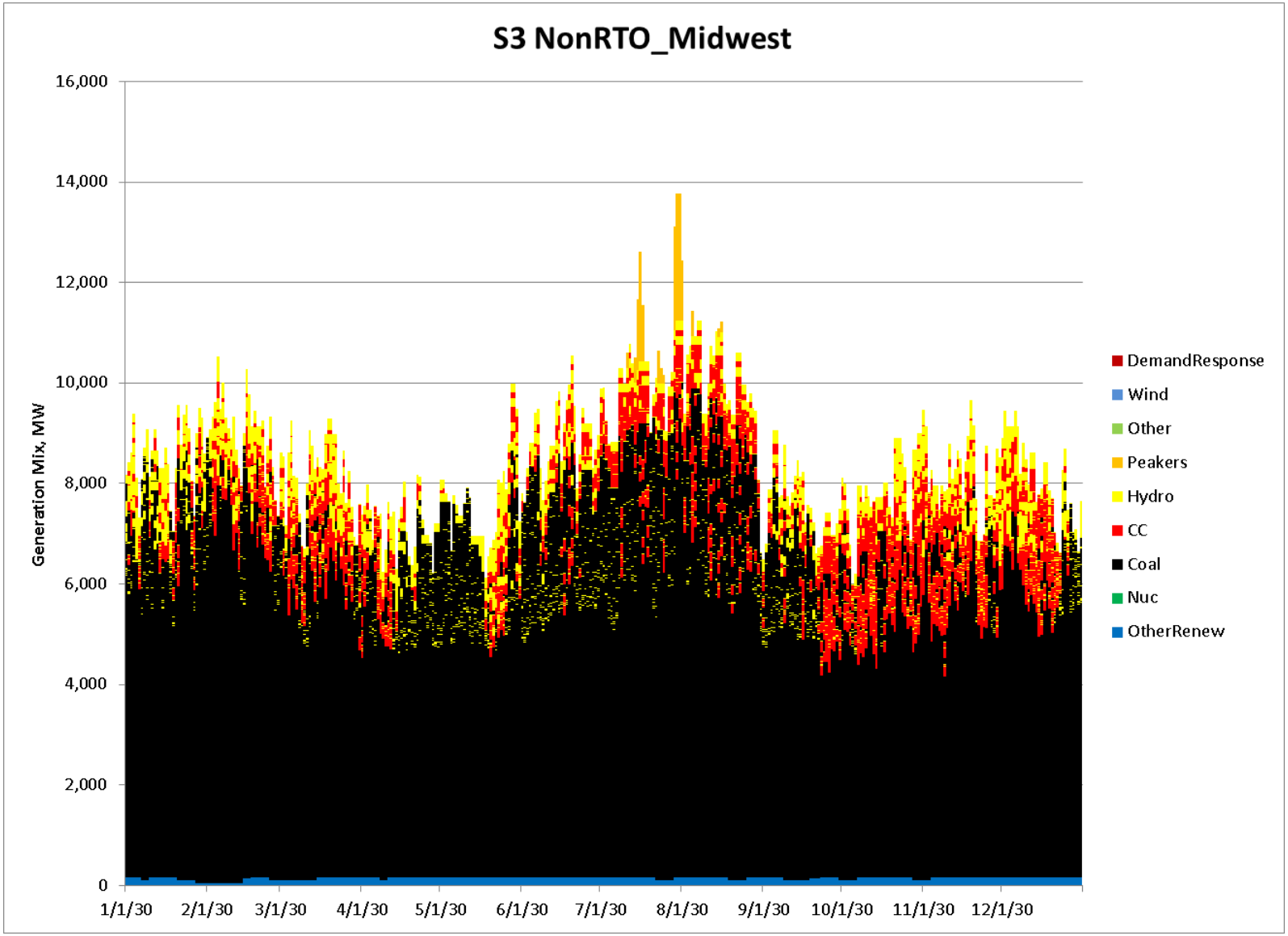

S3 MISO_MO_IL
Generation Mix, MW
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

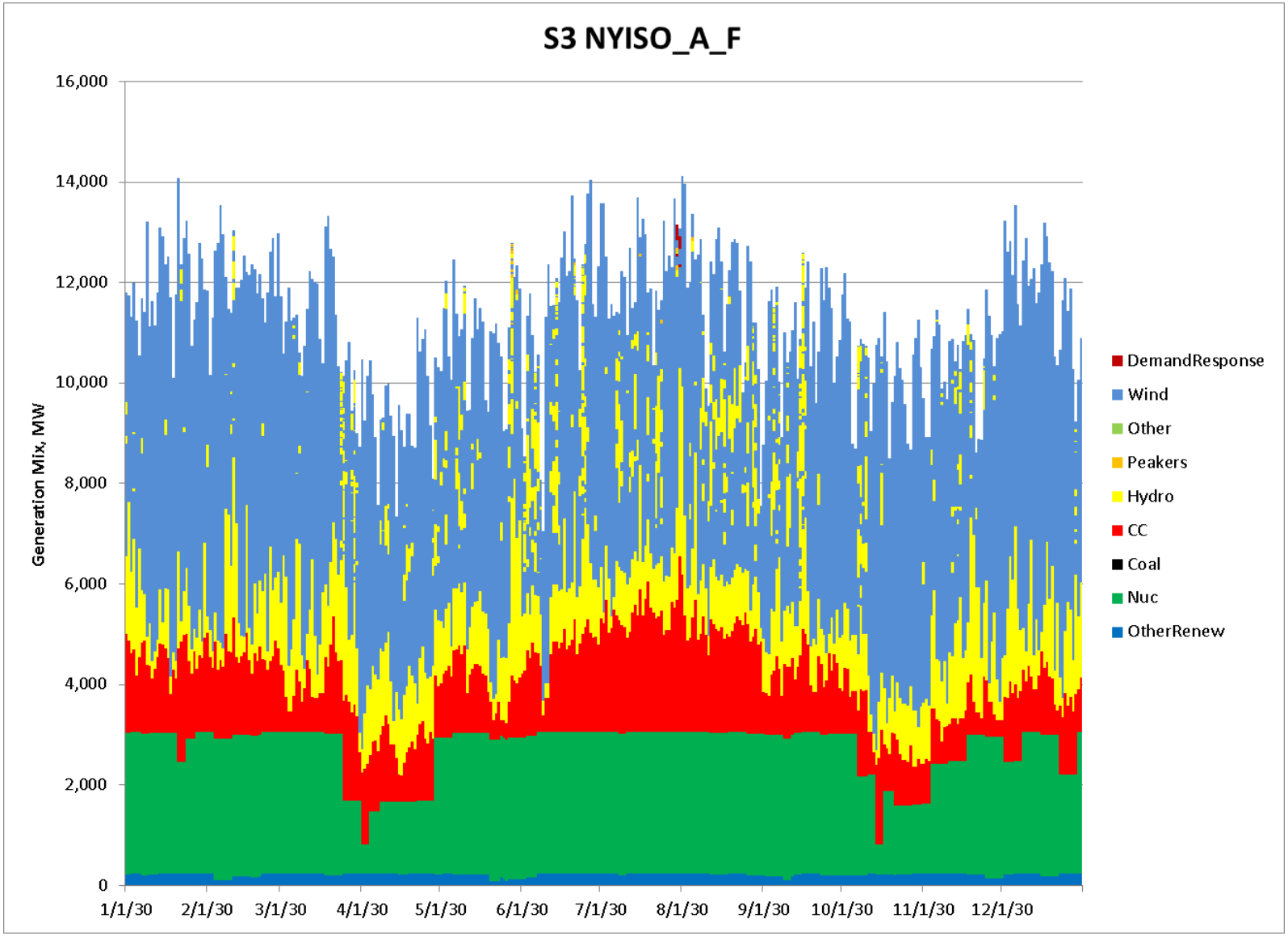

S3 MISO_W
Generation Mix, MW
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

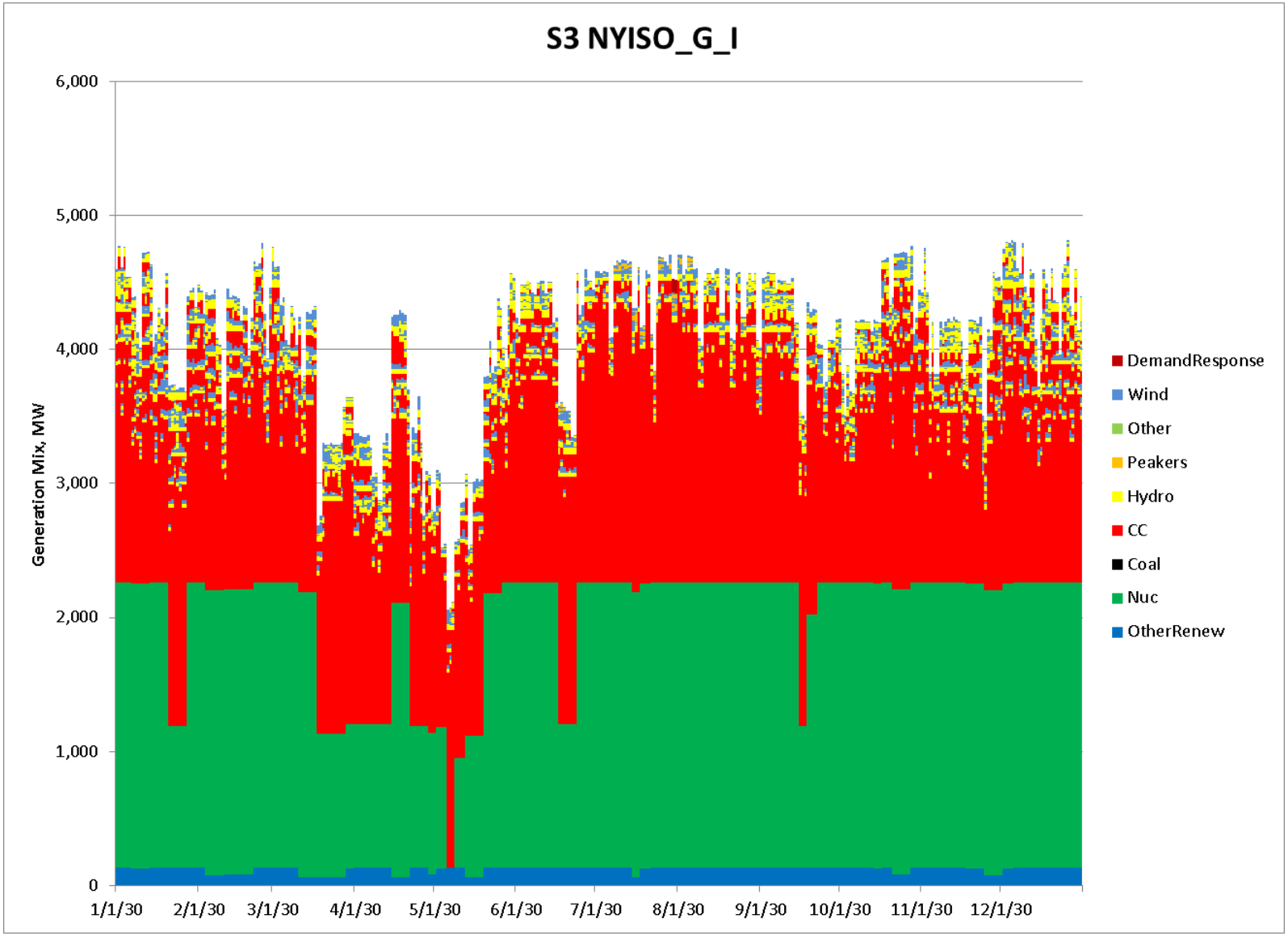

S3 MISO_WUMS
Generation Mix, MW
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

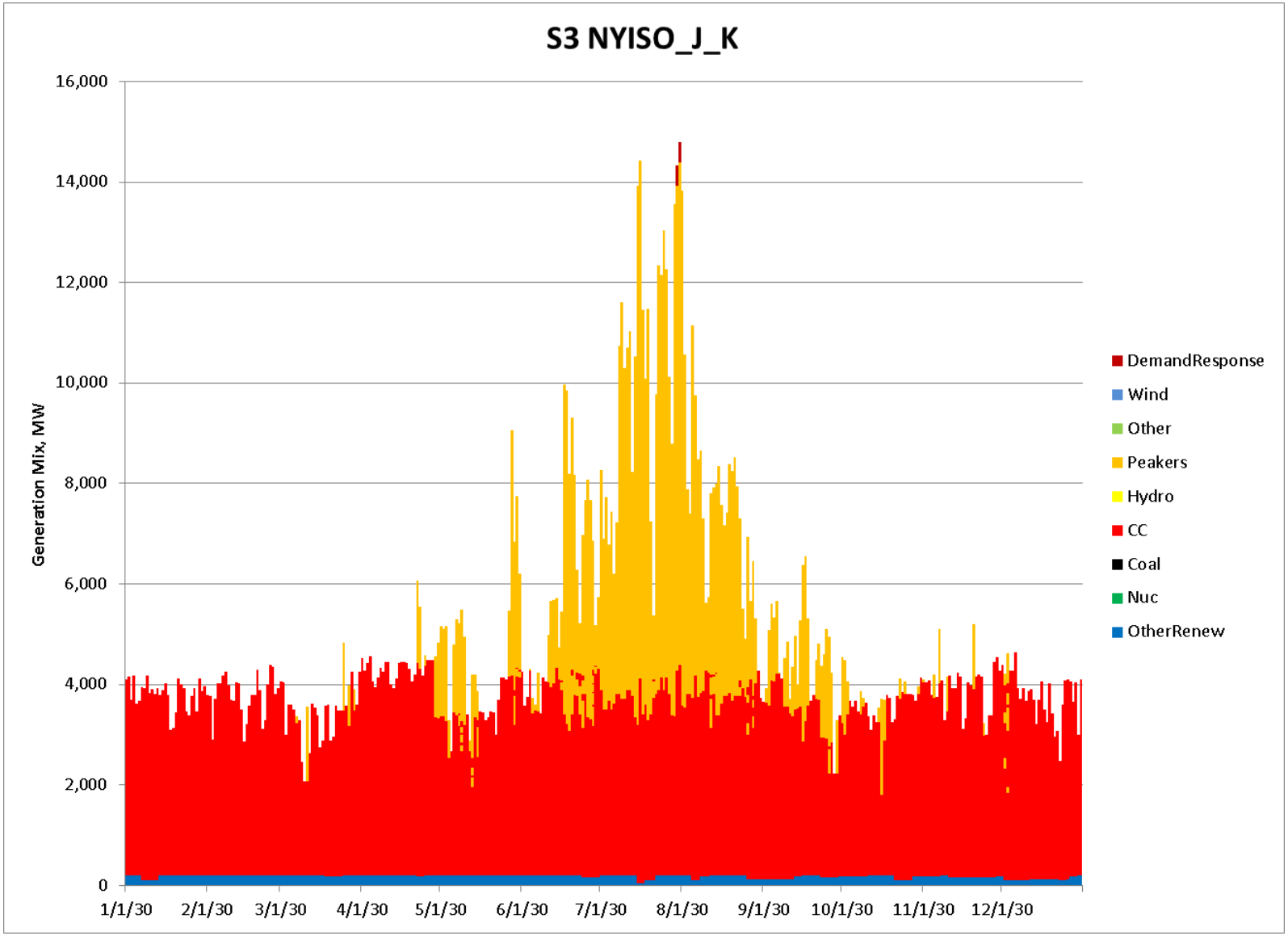

S3 NE
Generation Mix, MW
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

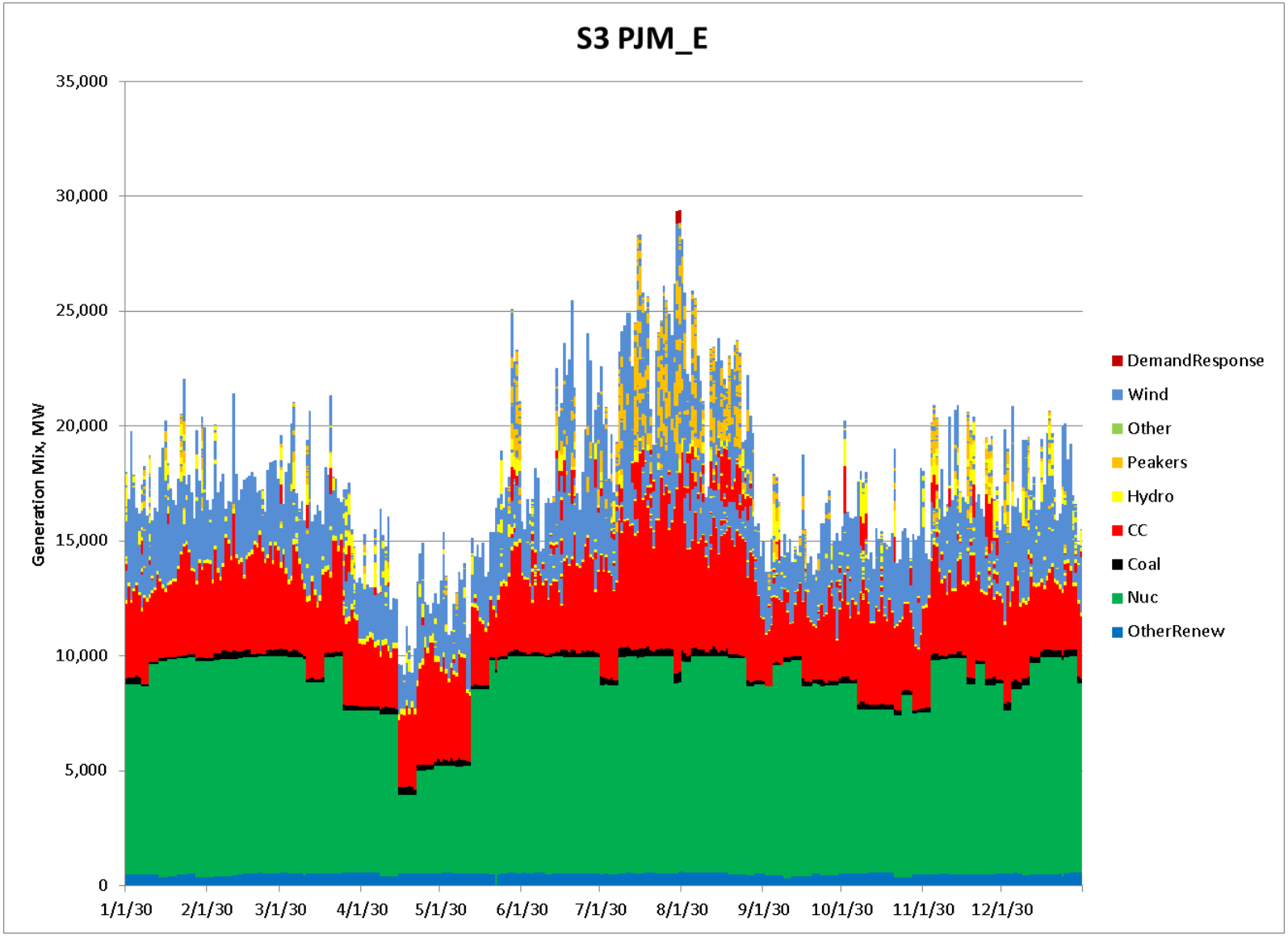

S3 NEISO
30,000
25,000
20,000
15,000
10,000
5,000
0
Generation Mix, MW
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

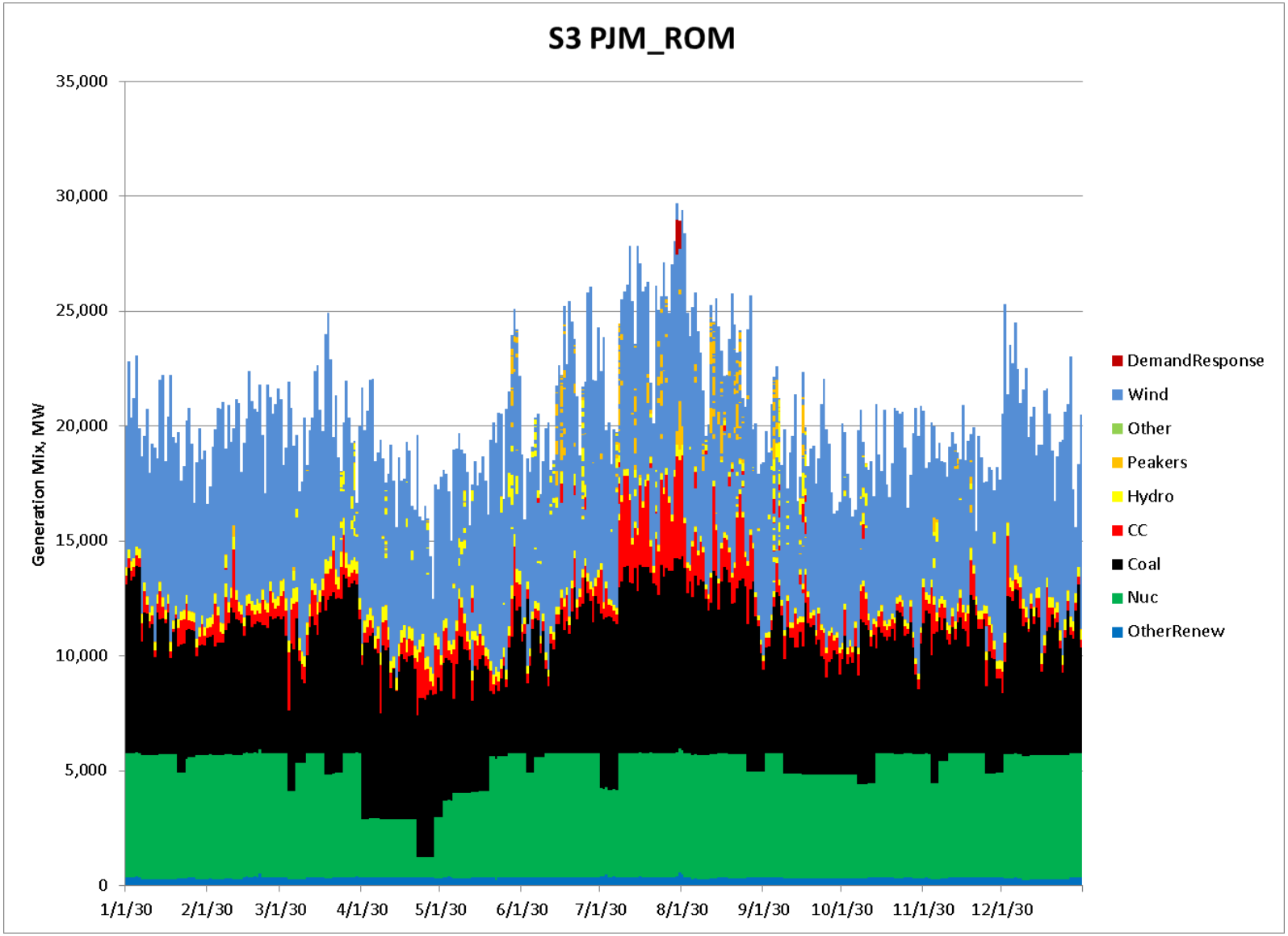

S3 NonRTO_Midwest
Generation Mix, MW
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

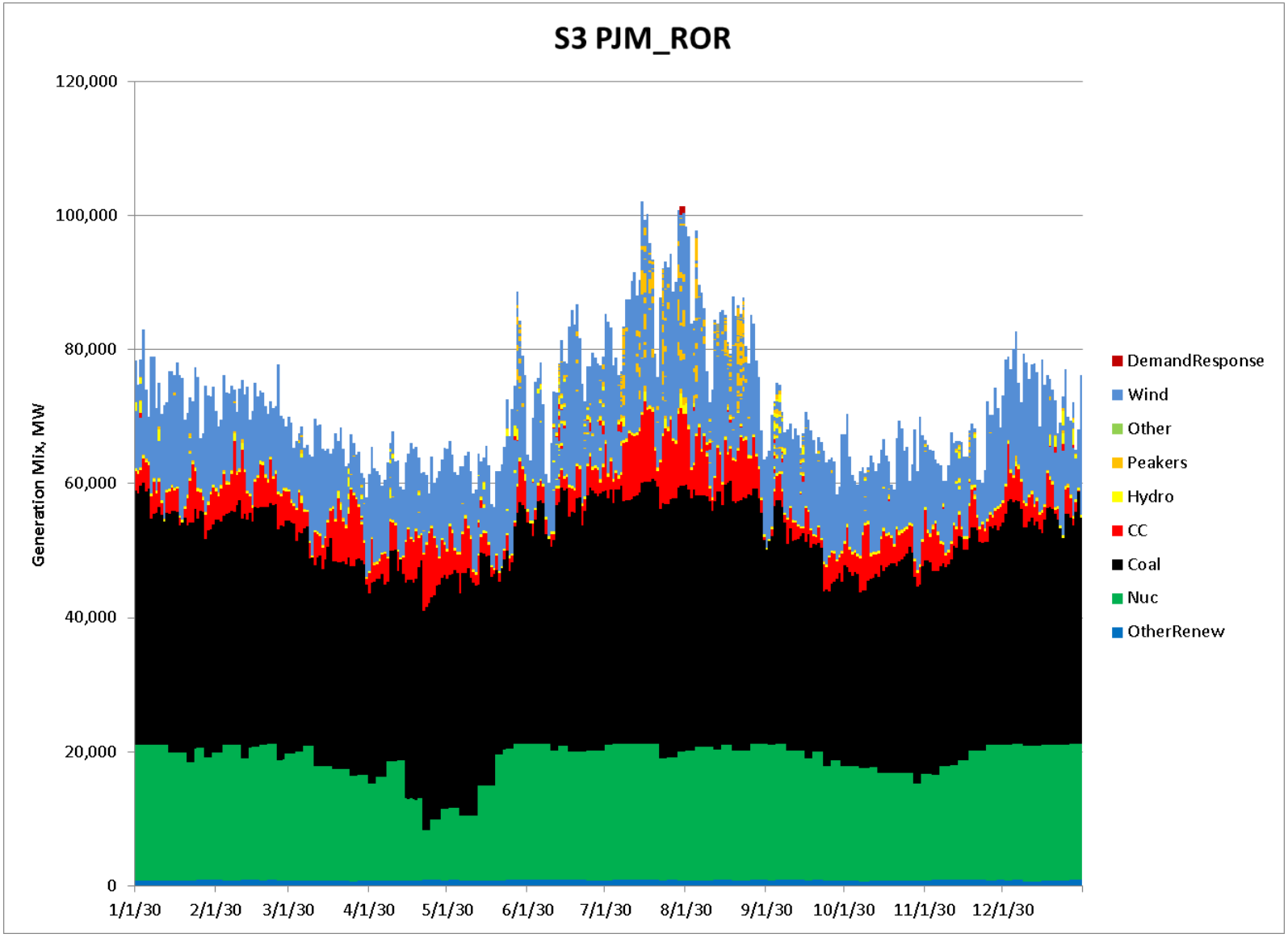

S3 NYISO_A_F
Generation Mix, MW
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

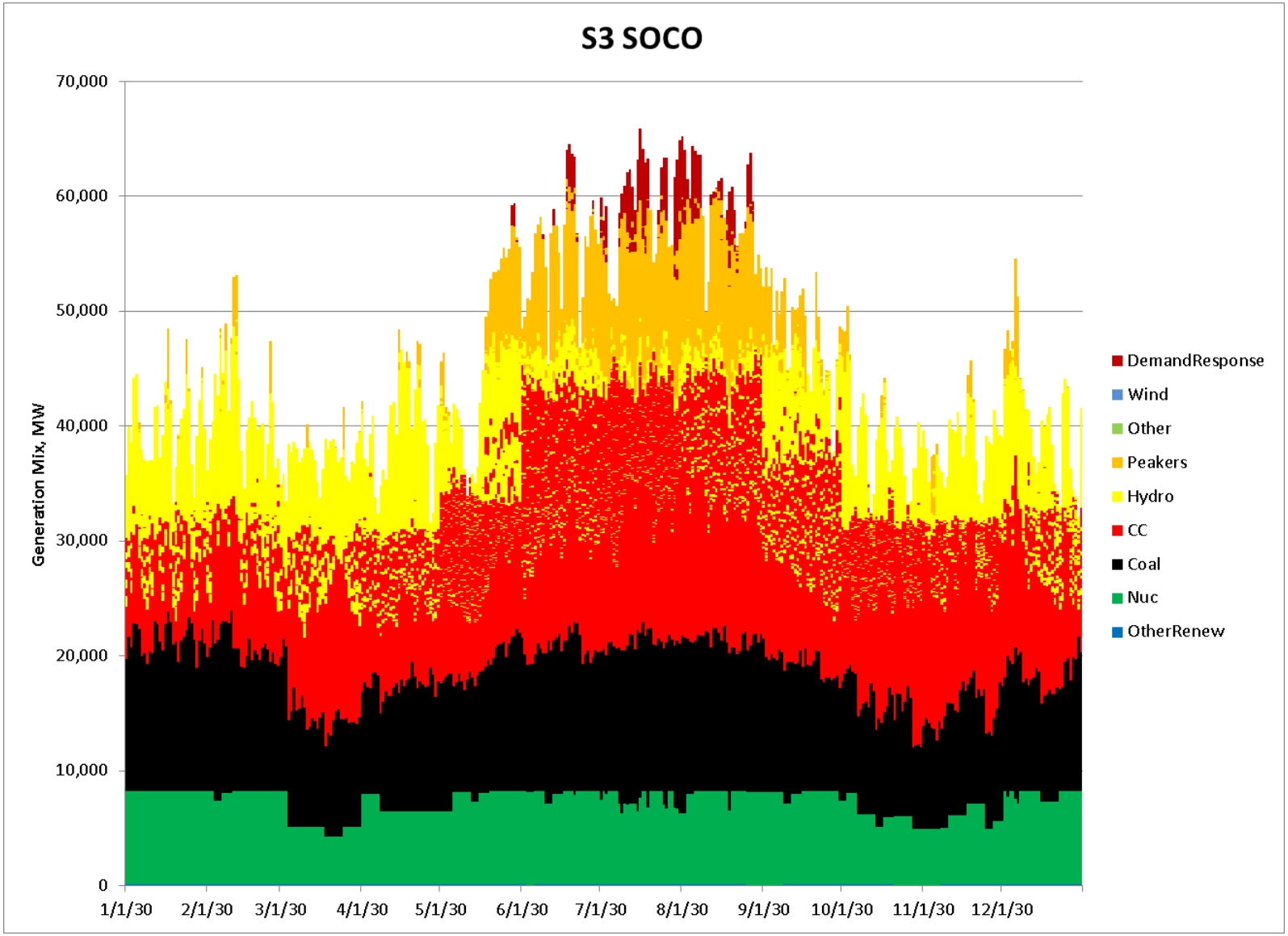

S3 NYISO_G_I
Generation Mix, MW
6,000
5,000
4,000
3,000
2,000
1,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

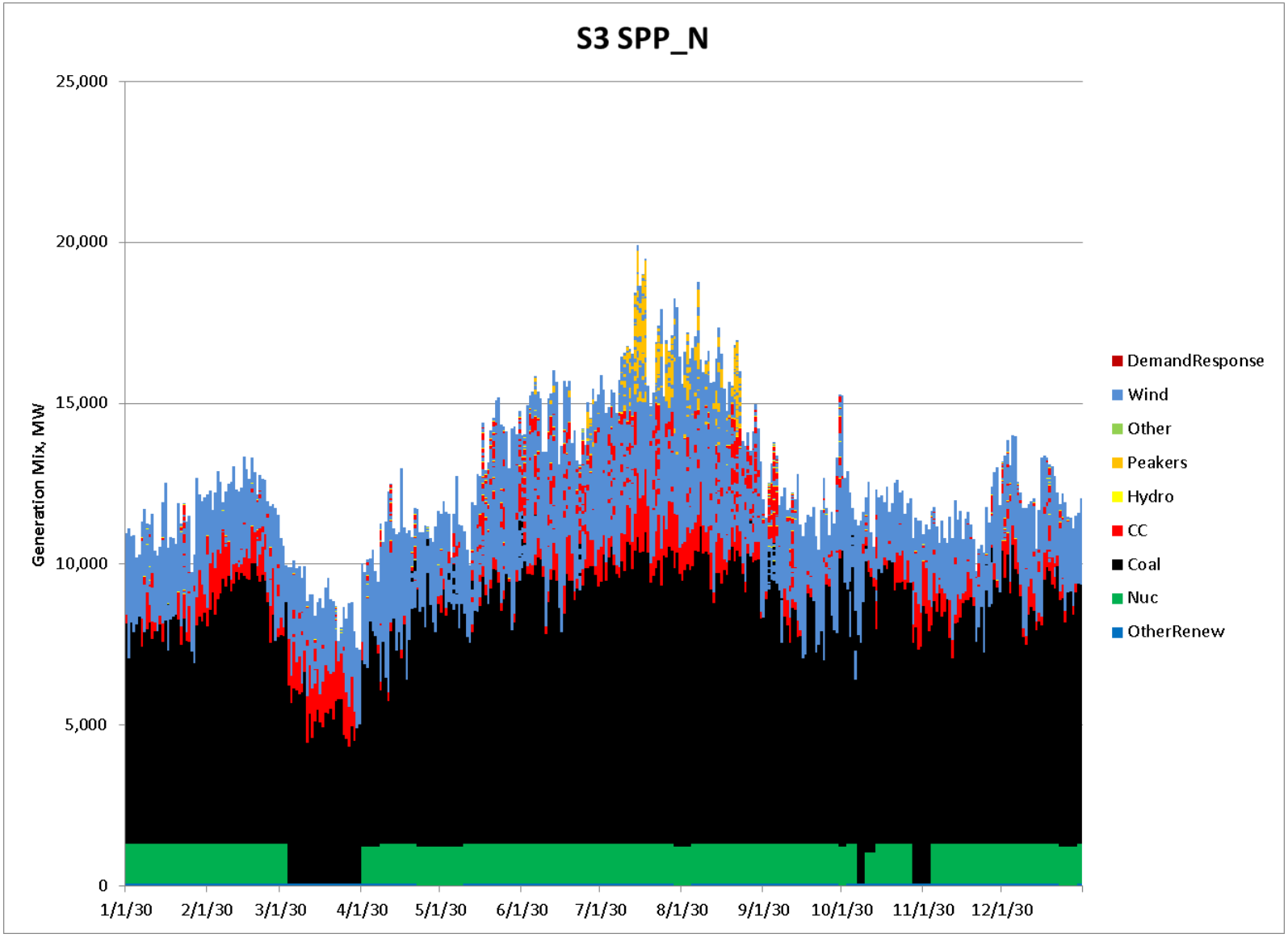

S3 NYISO_J_K
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Generation Mix, MW
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

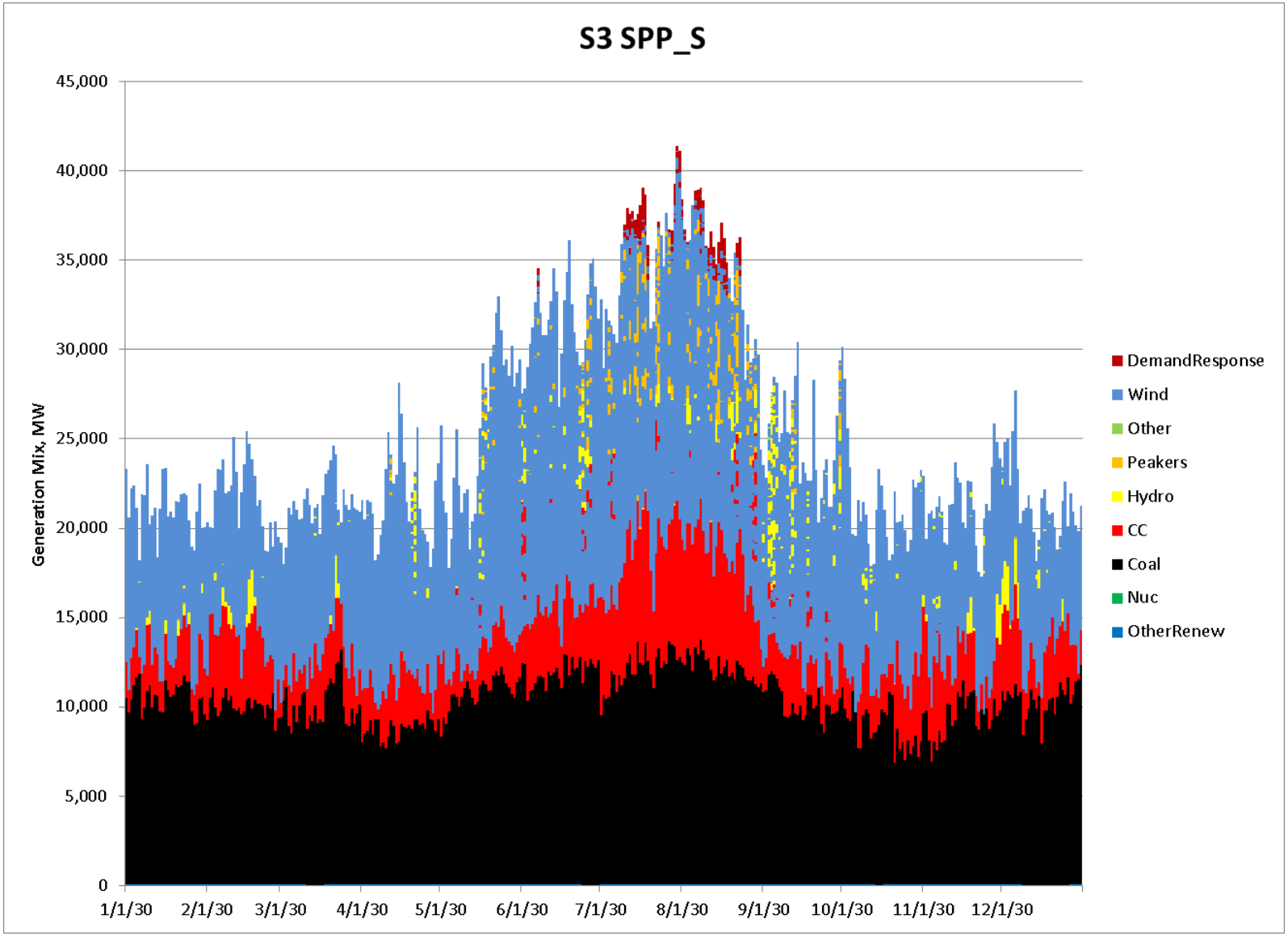

S3 PJM_E
Generation Mix, MW
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

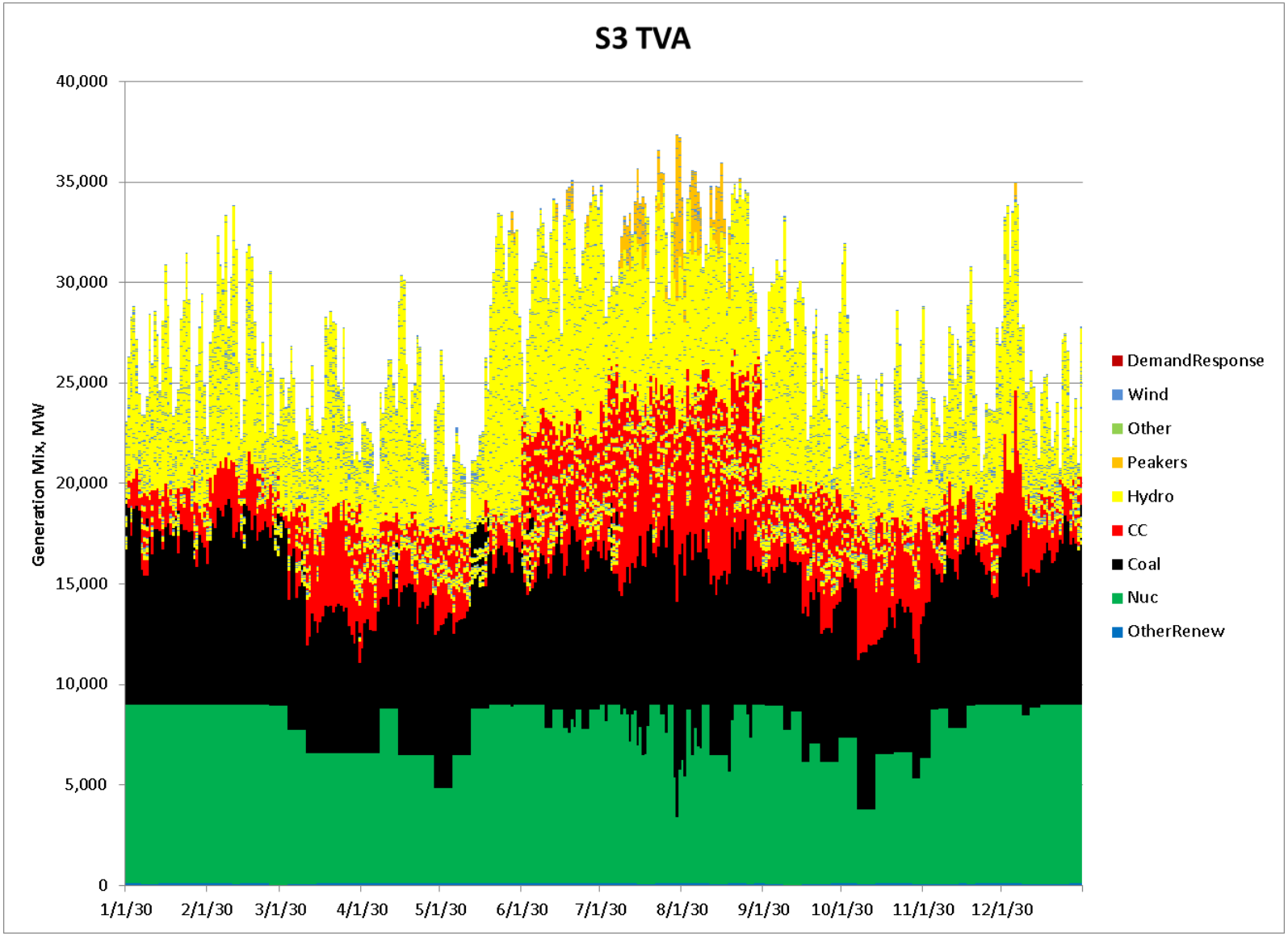

S3 PJM_ROM
Generation Mix, MW
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

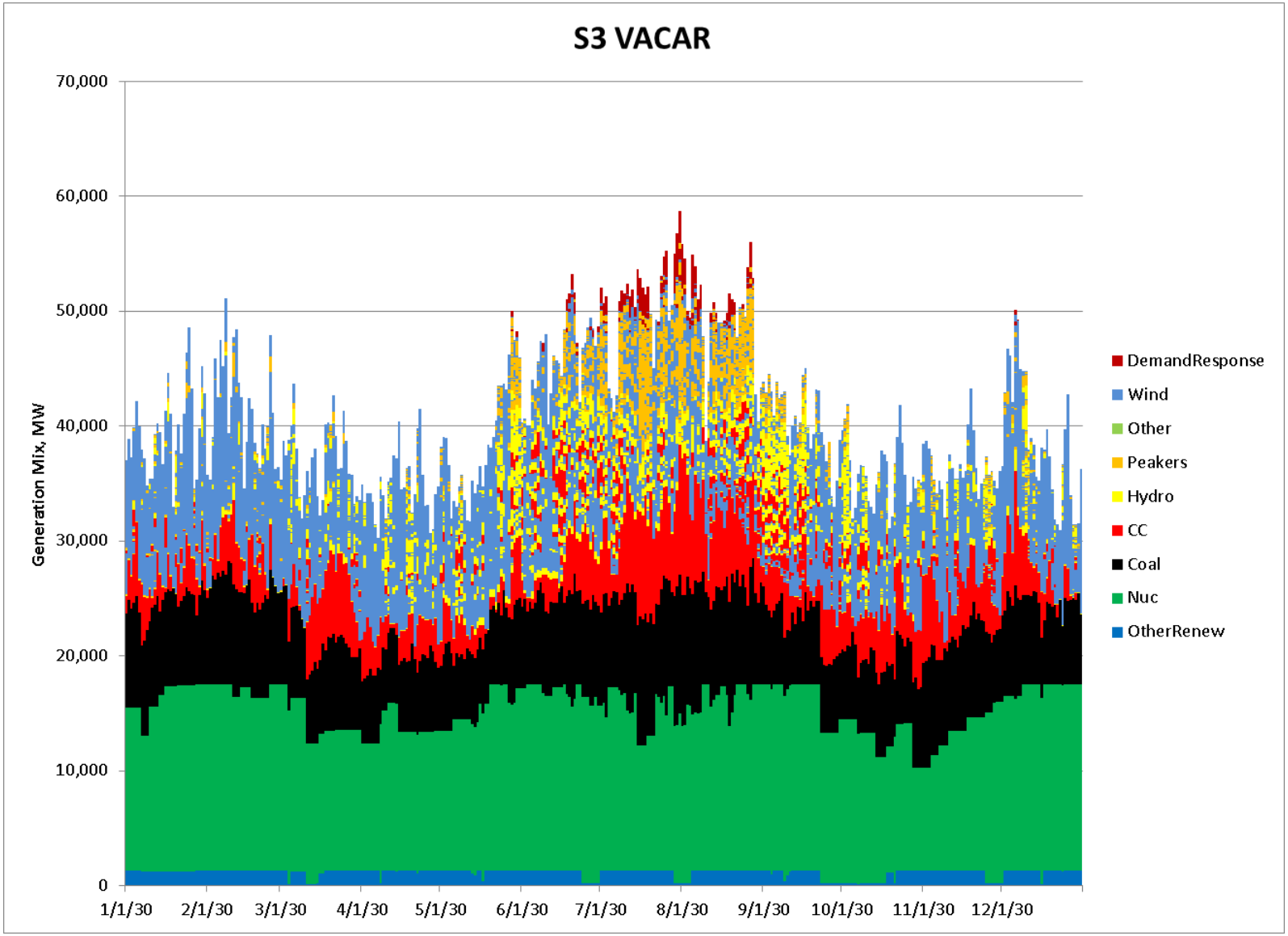

S3 PJM_ROR
120,000
100,000
80,000
60,000
40,000
20,000
0
Generation Mix, MW
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 SOCO
Generation Mix, MW
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 SPP_N
25,000
20,000
15,000
10,000
5,000
0
Generation Mix, MW
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

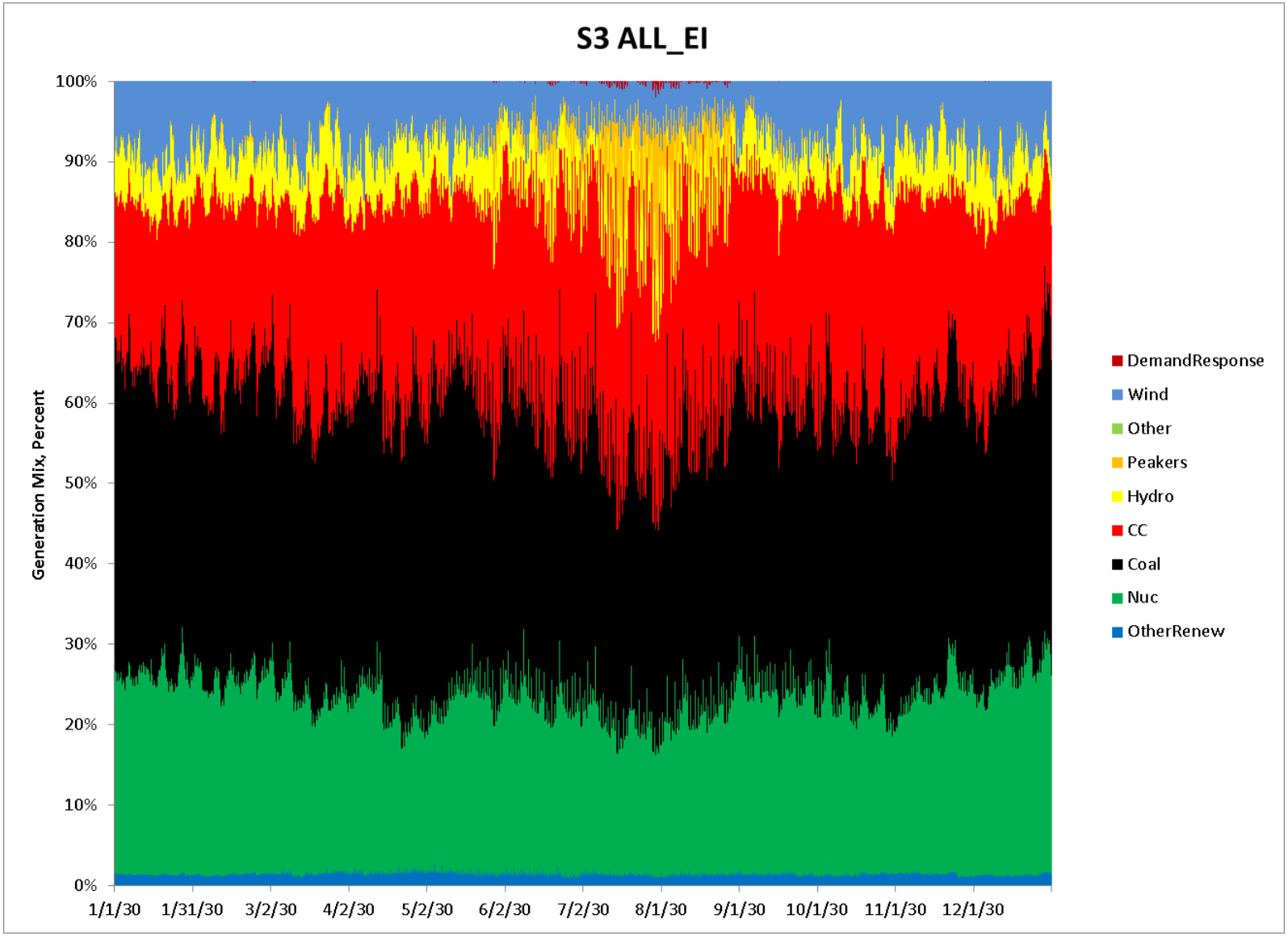

S3 SPP_S
Generation Mix, MW
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

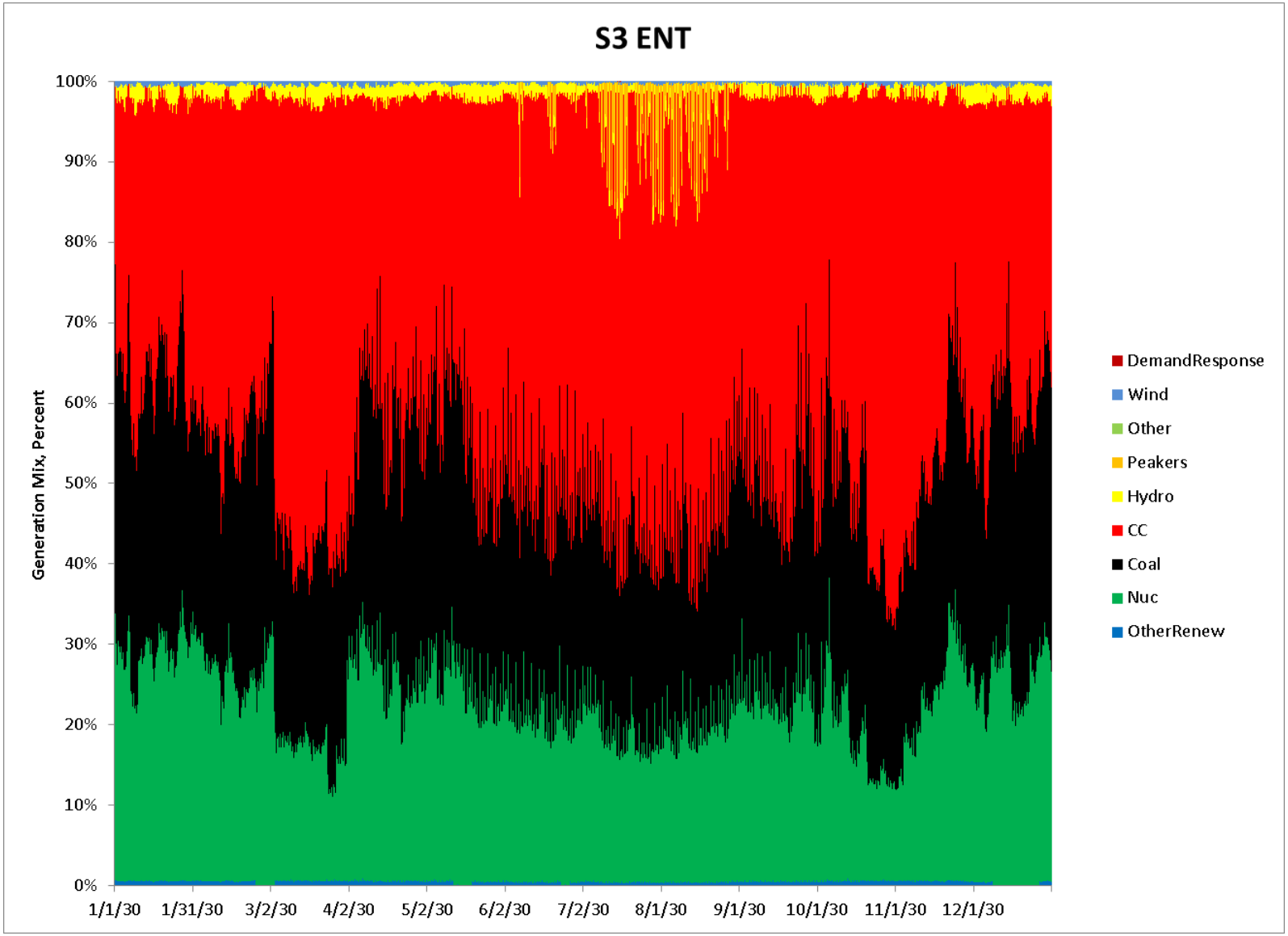

S3 TVA
Generation Mix, MW
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

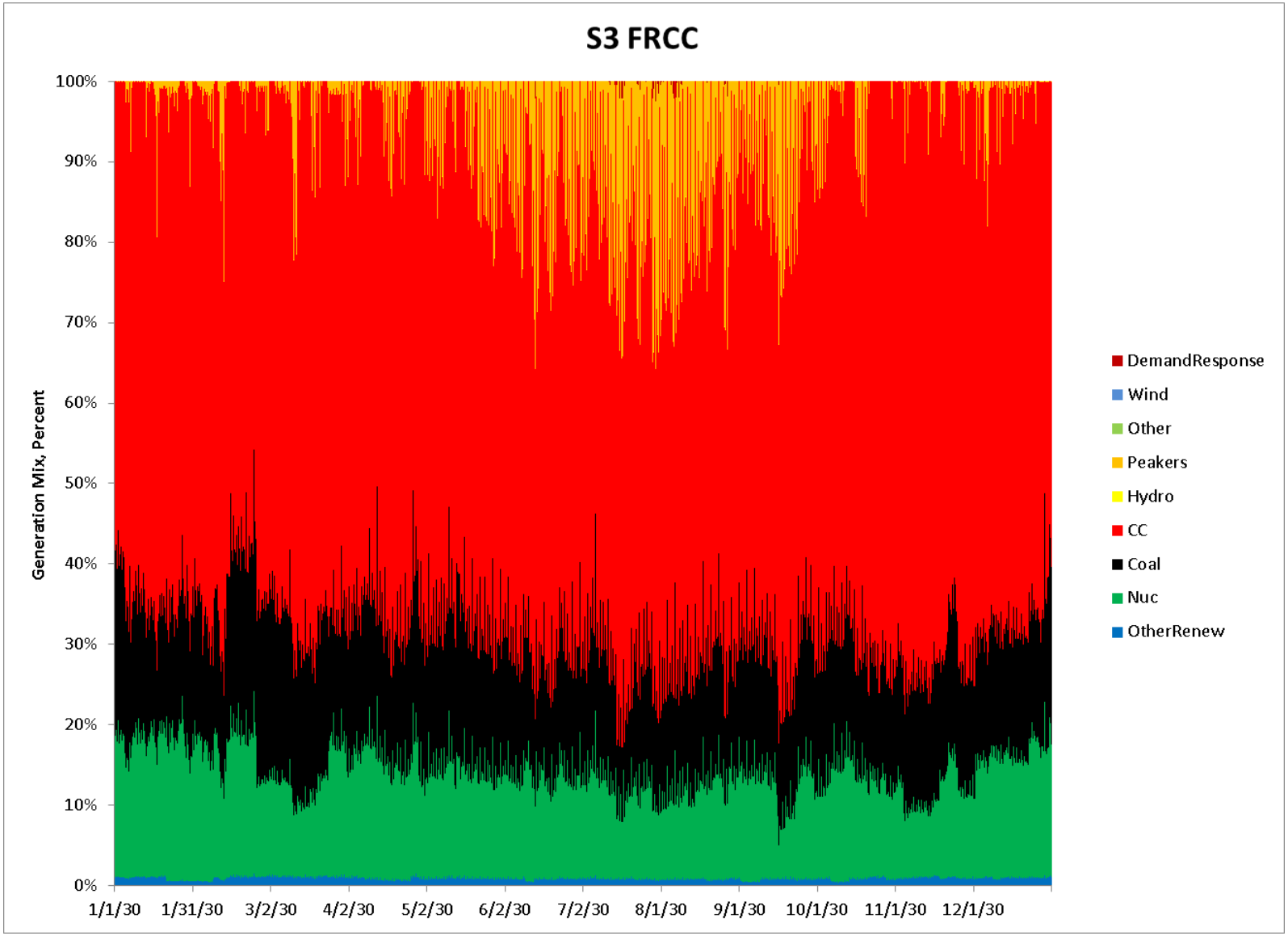

S3 VACAR
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Generation Mix, MW
1/1/30
2/1/30
3/1/30
4/1/30
5/1/30
6/1/30
7/1/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

Percent (%)

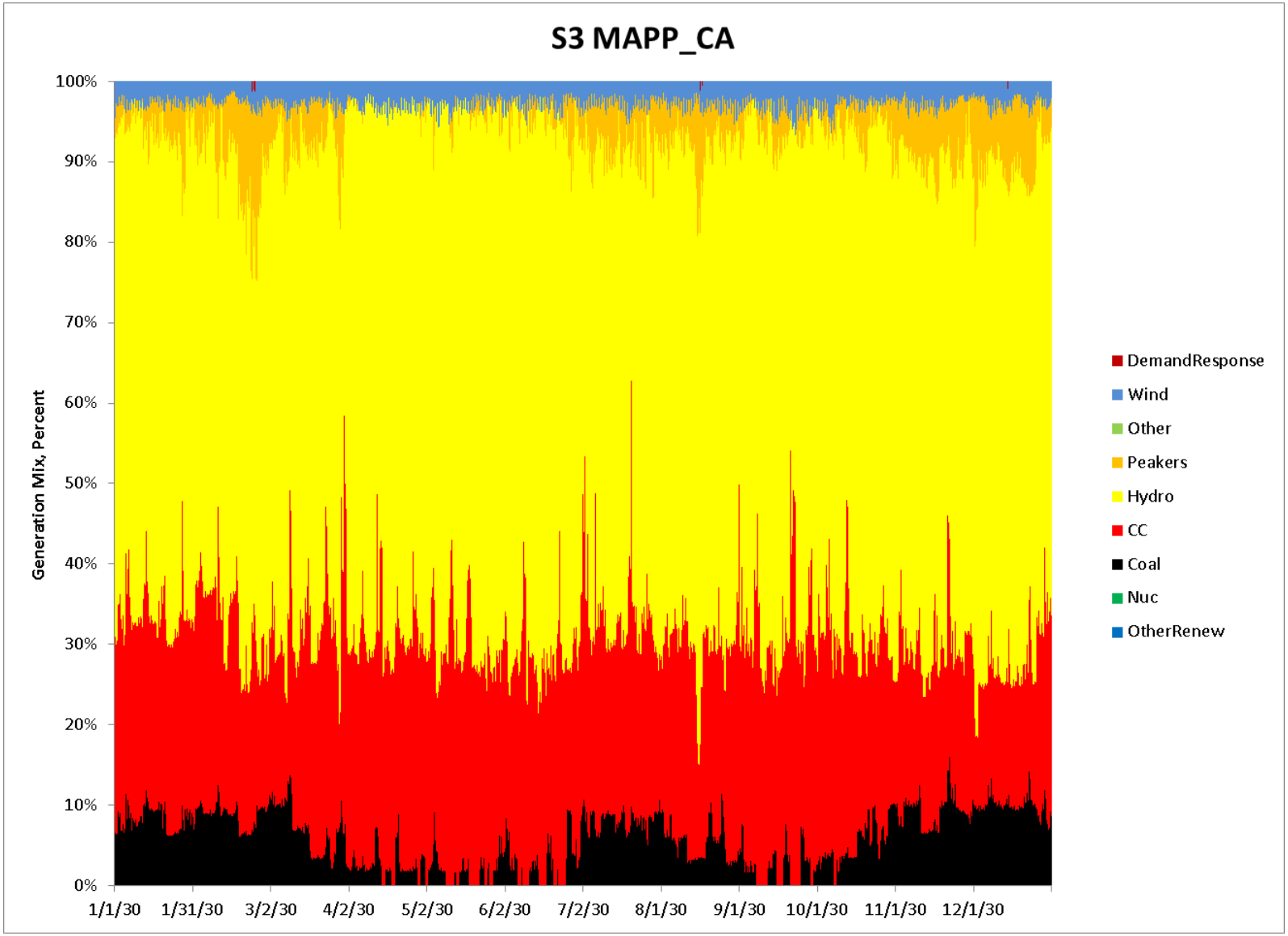
- 25 plots, one for each NEEM region and total

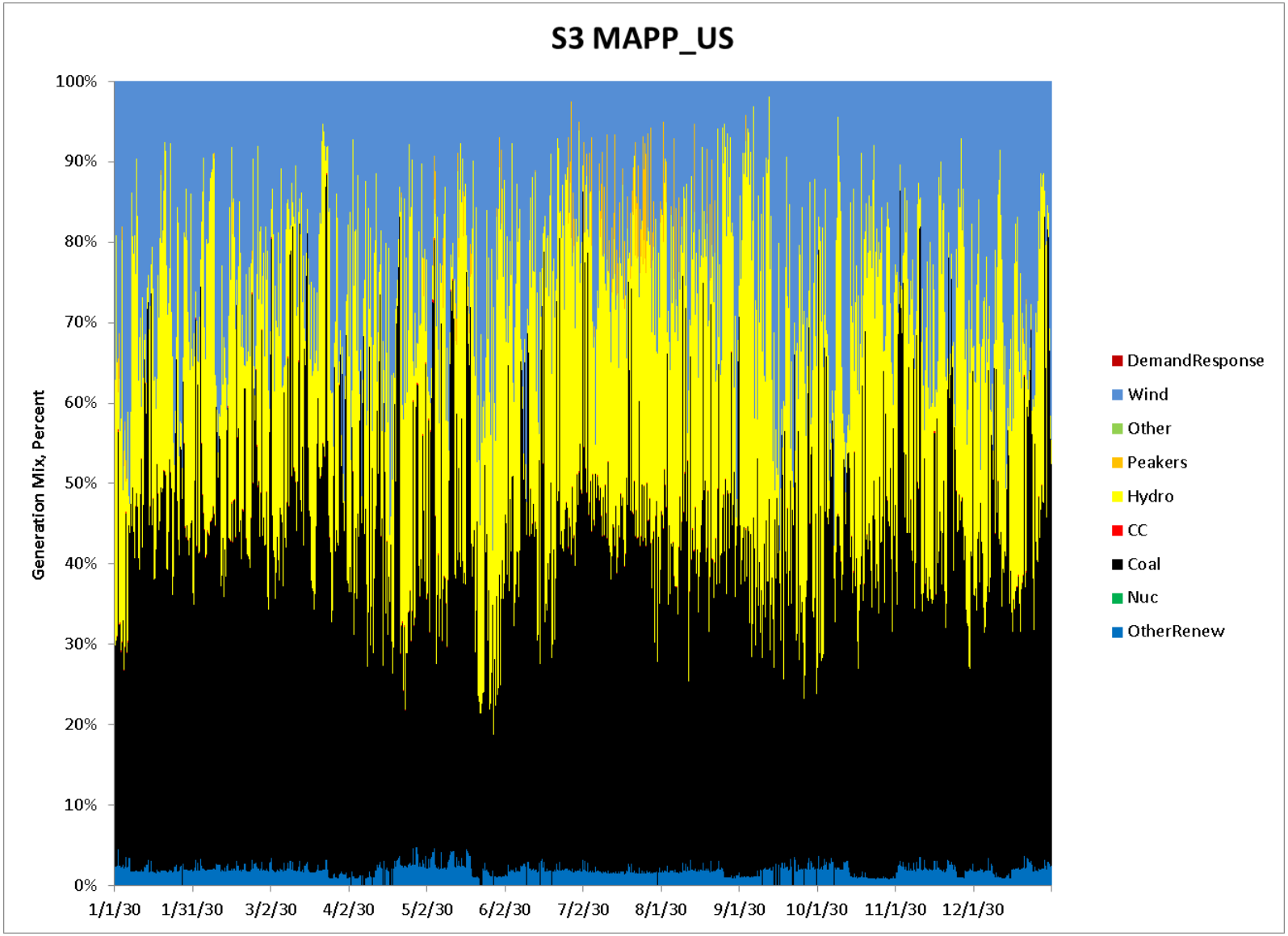

S3 ALL_EI
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

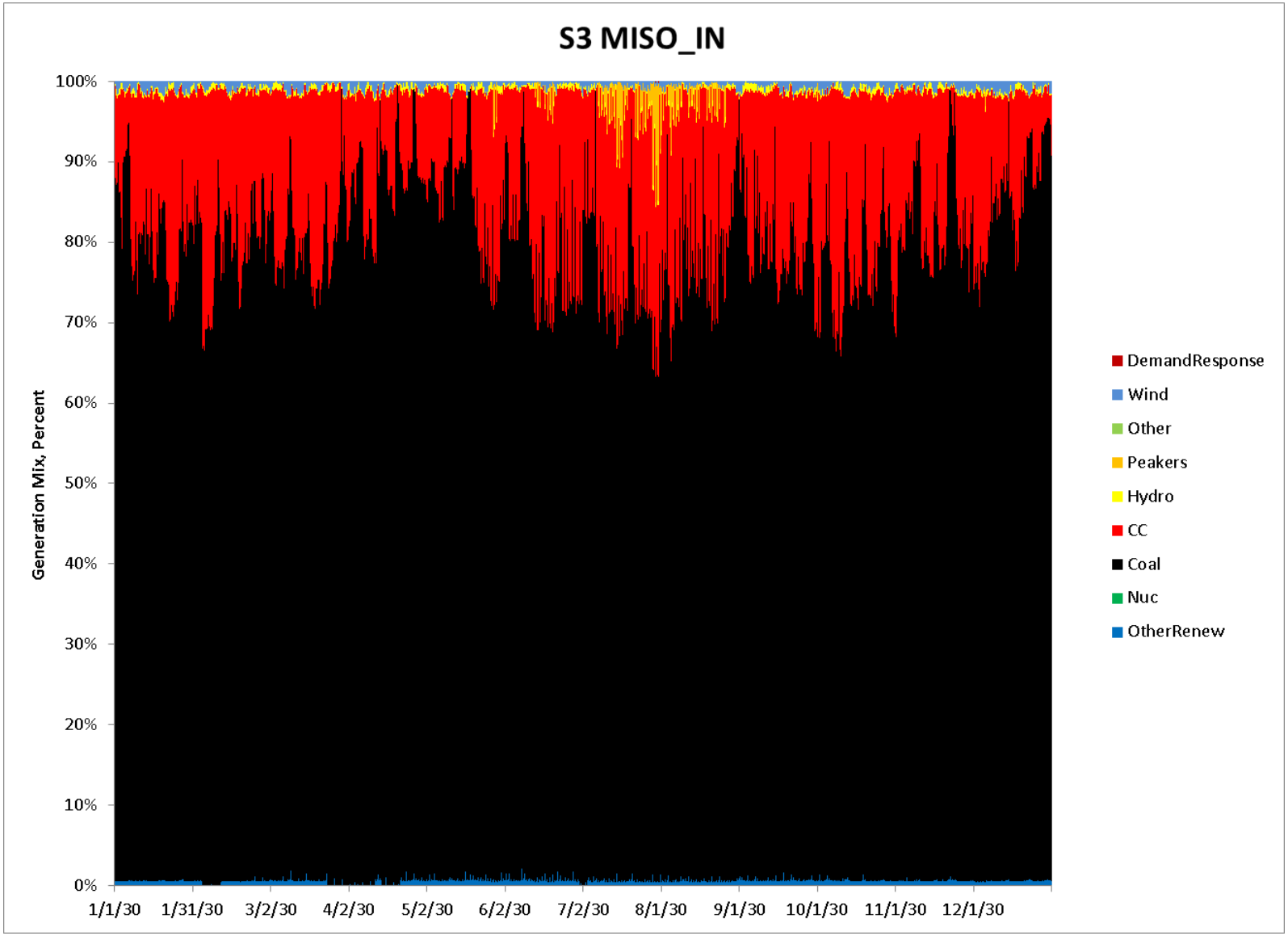

S3 ENT
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

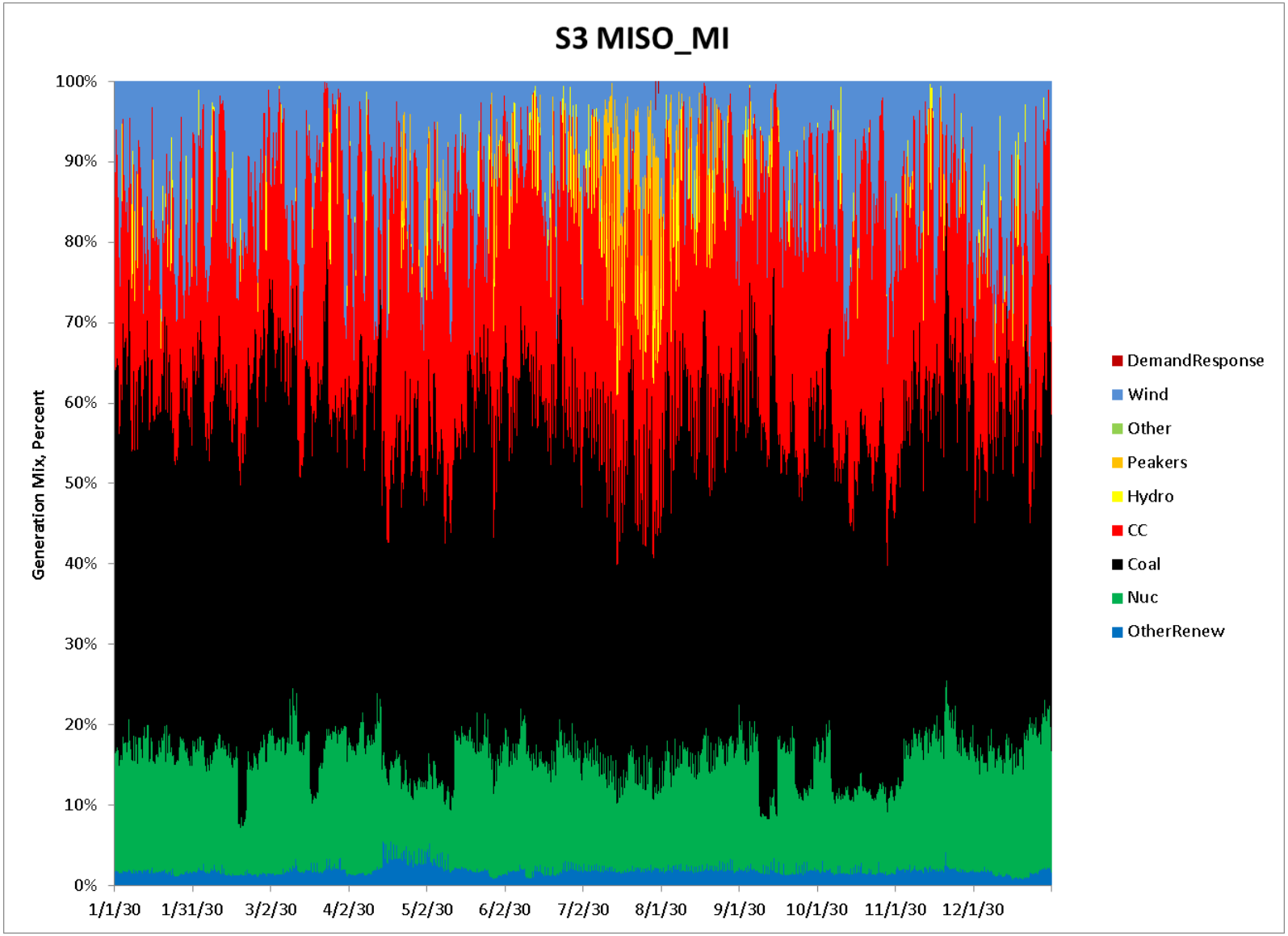

S3 FRCC
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

S3 IESO
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 MAPP_CA
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 MAPP_US
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 MISO_IN
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 MISO_MI
Generation Mix, Percent
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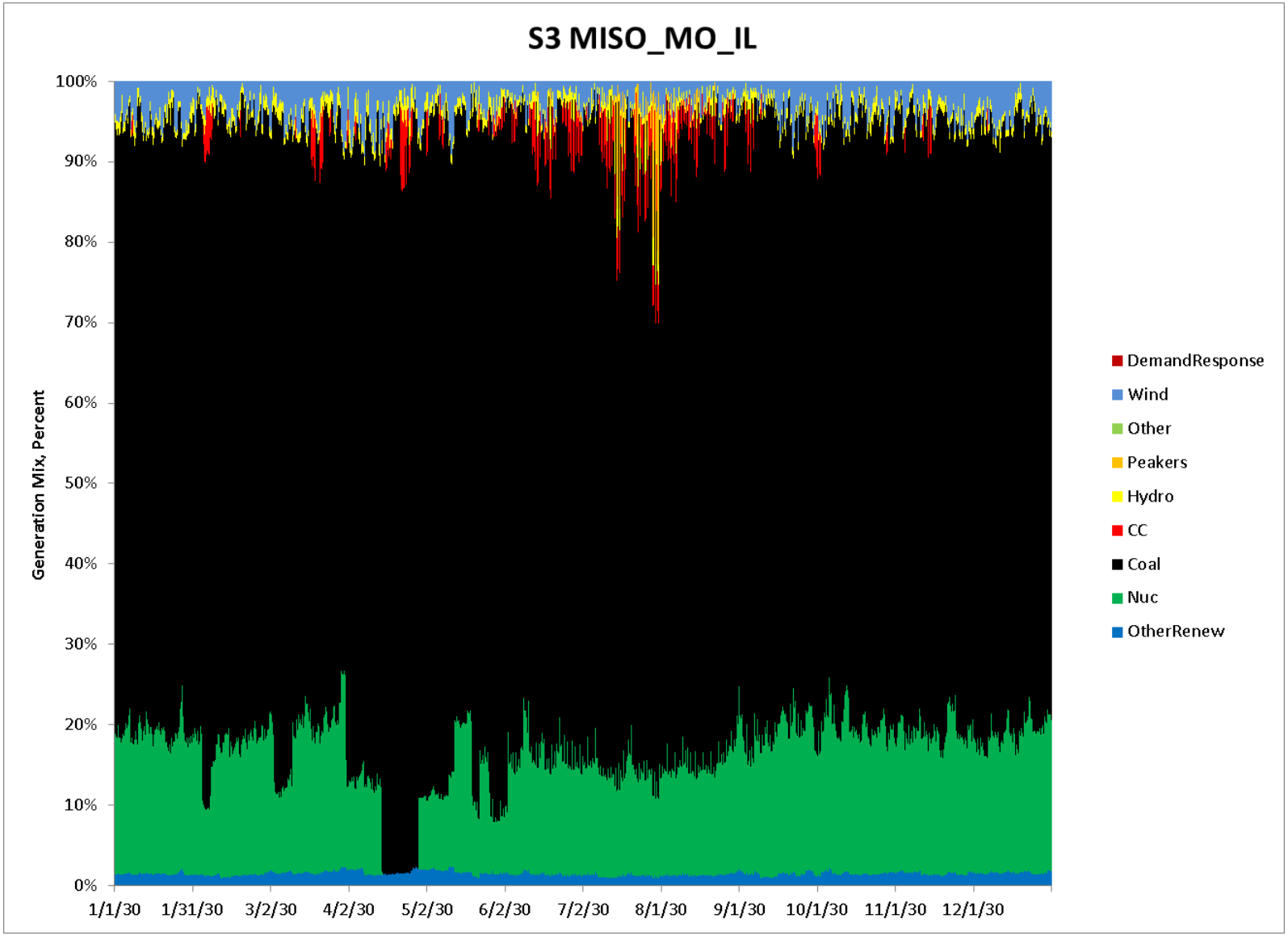
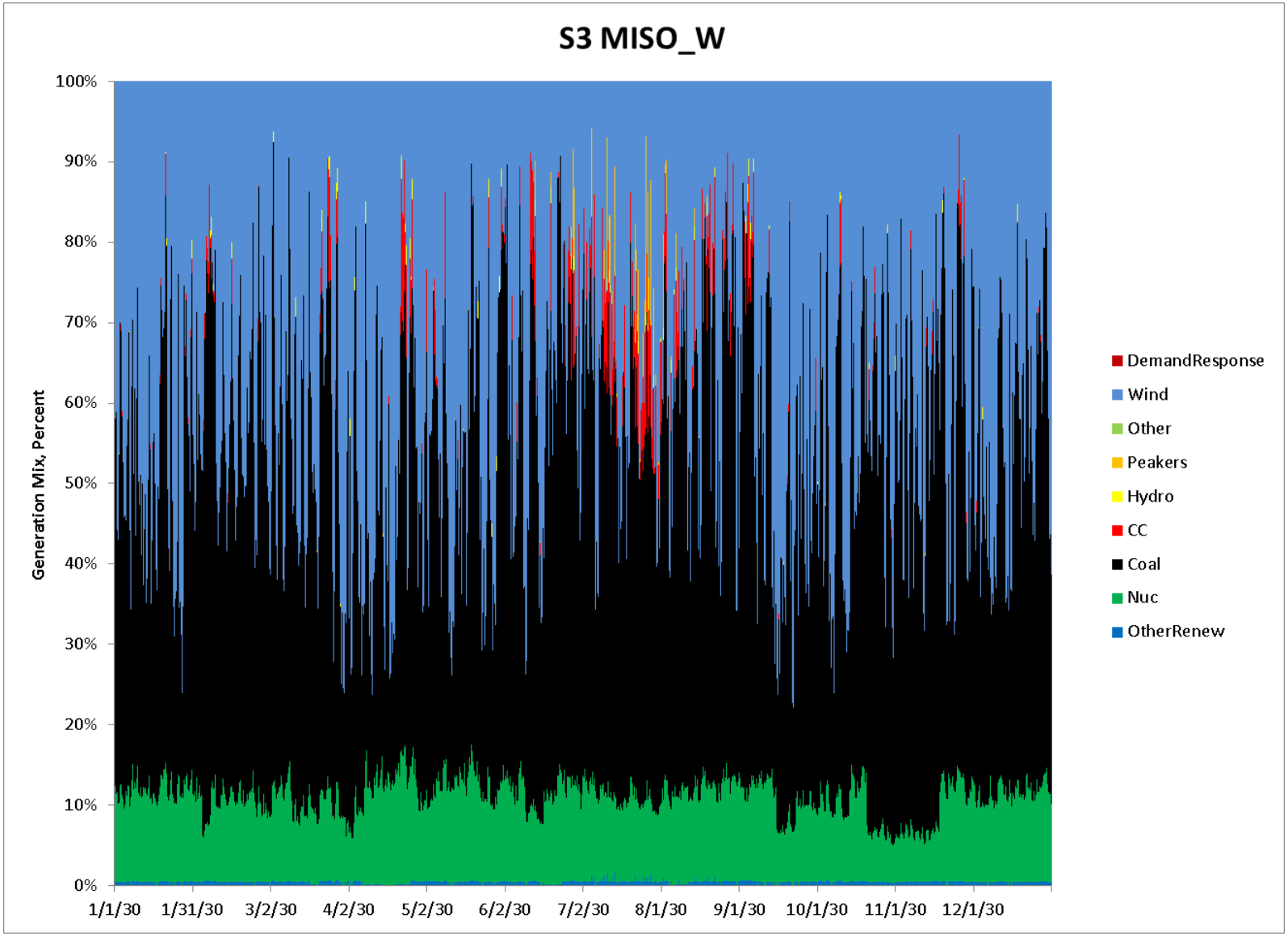
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 MISO_MO_IL
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 MISO_W
Generation Mix, Percent
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90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
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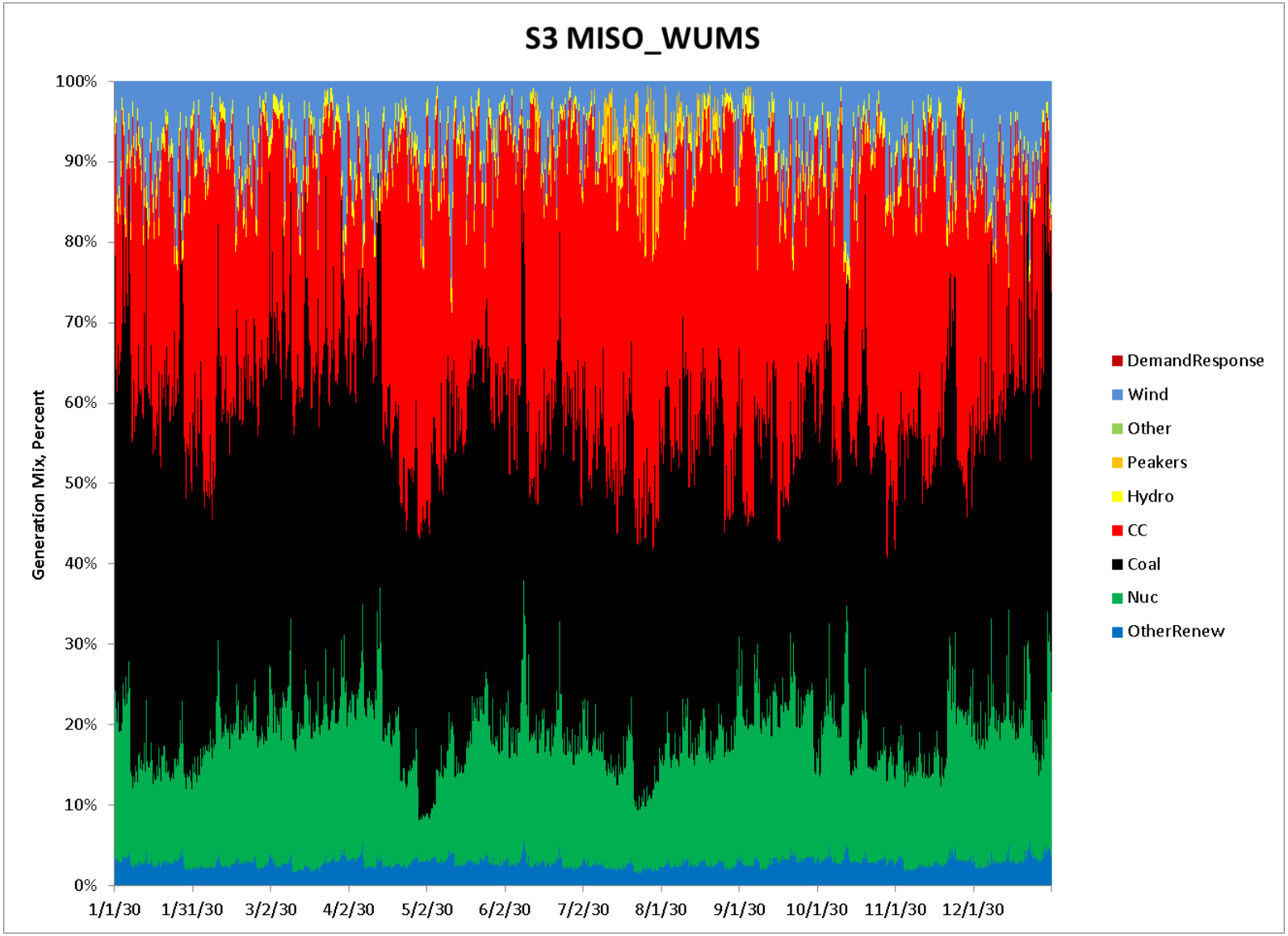
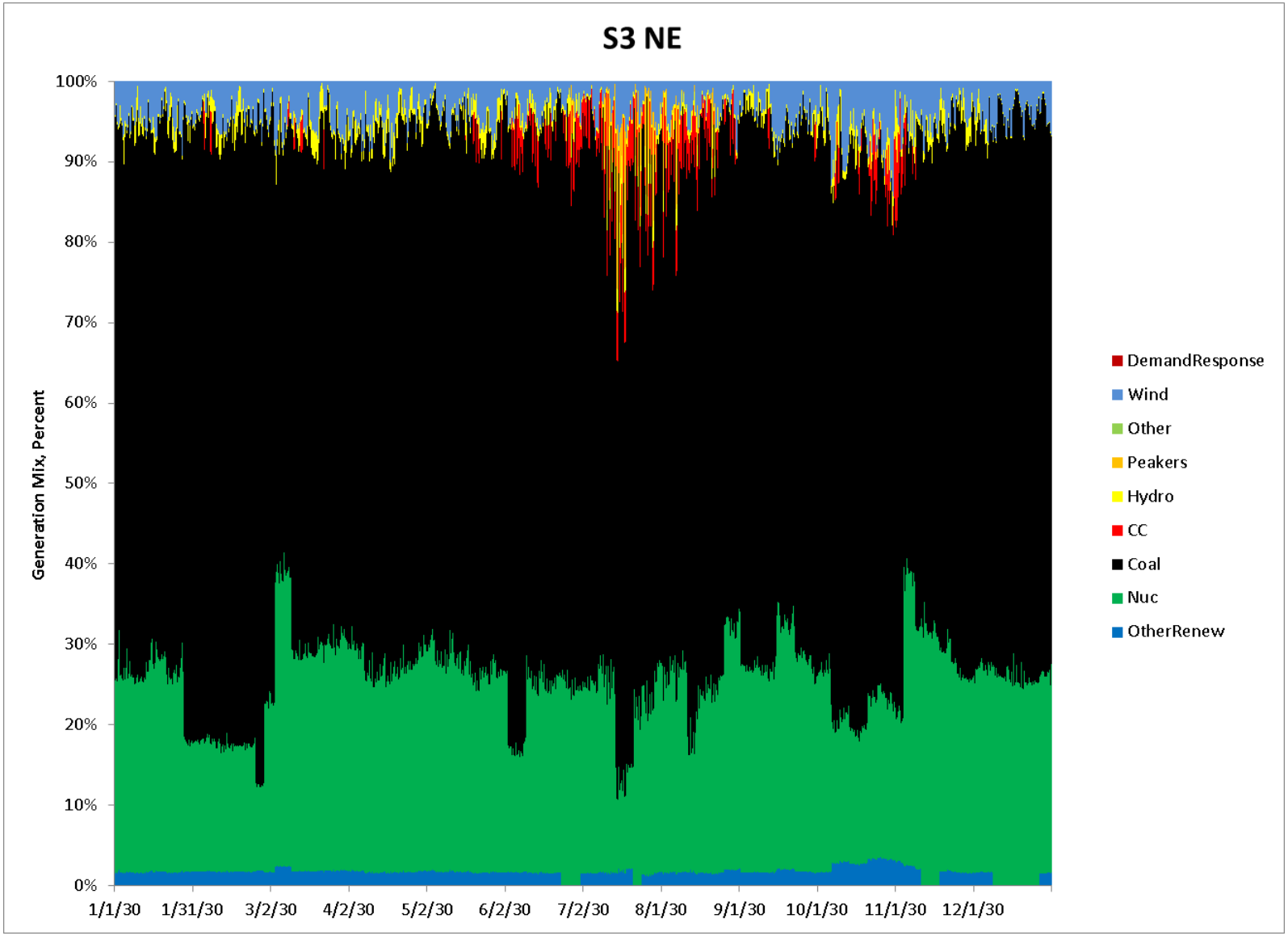
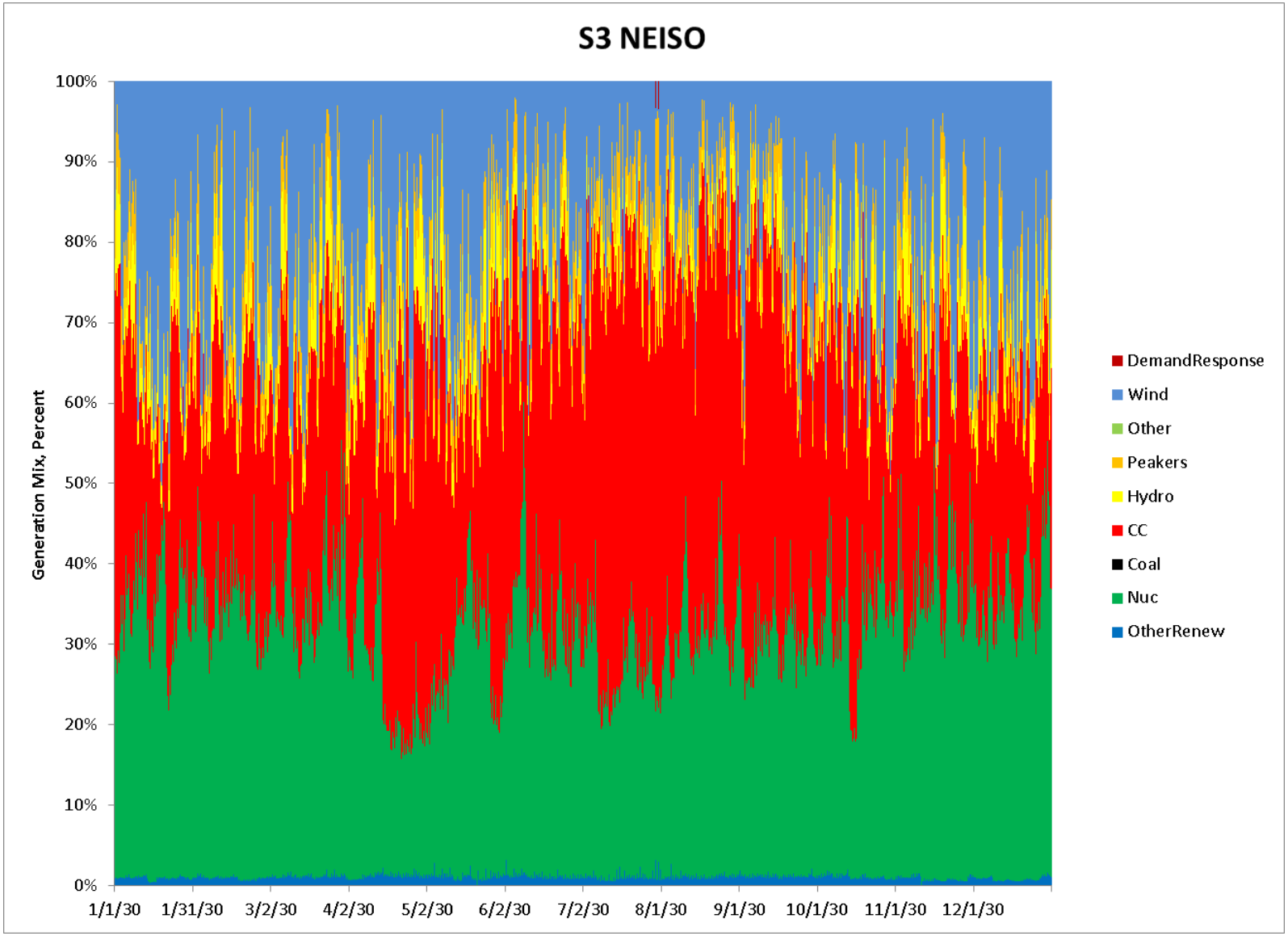
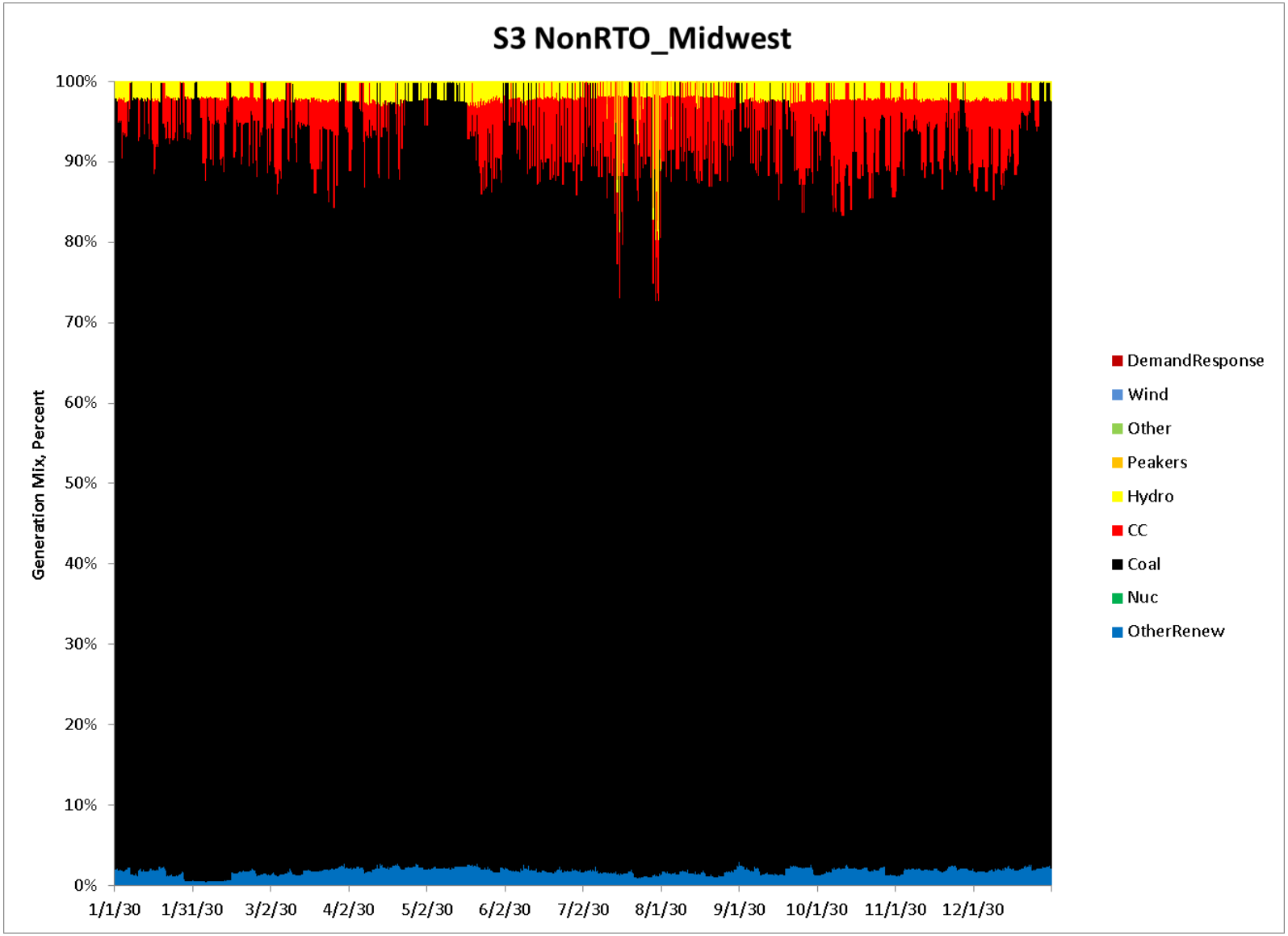
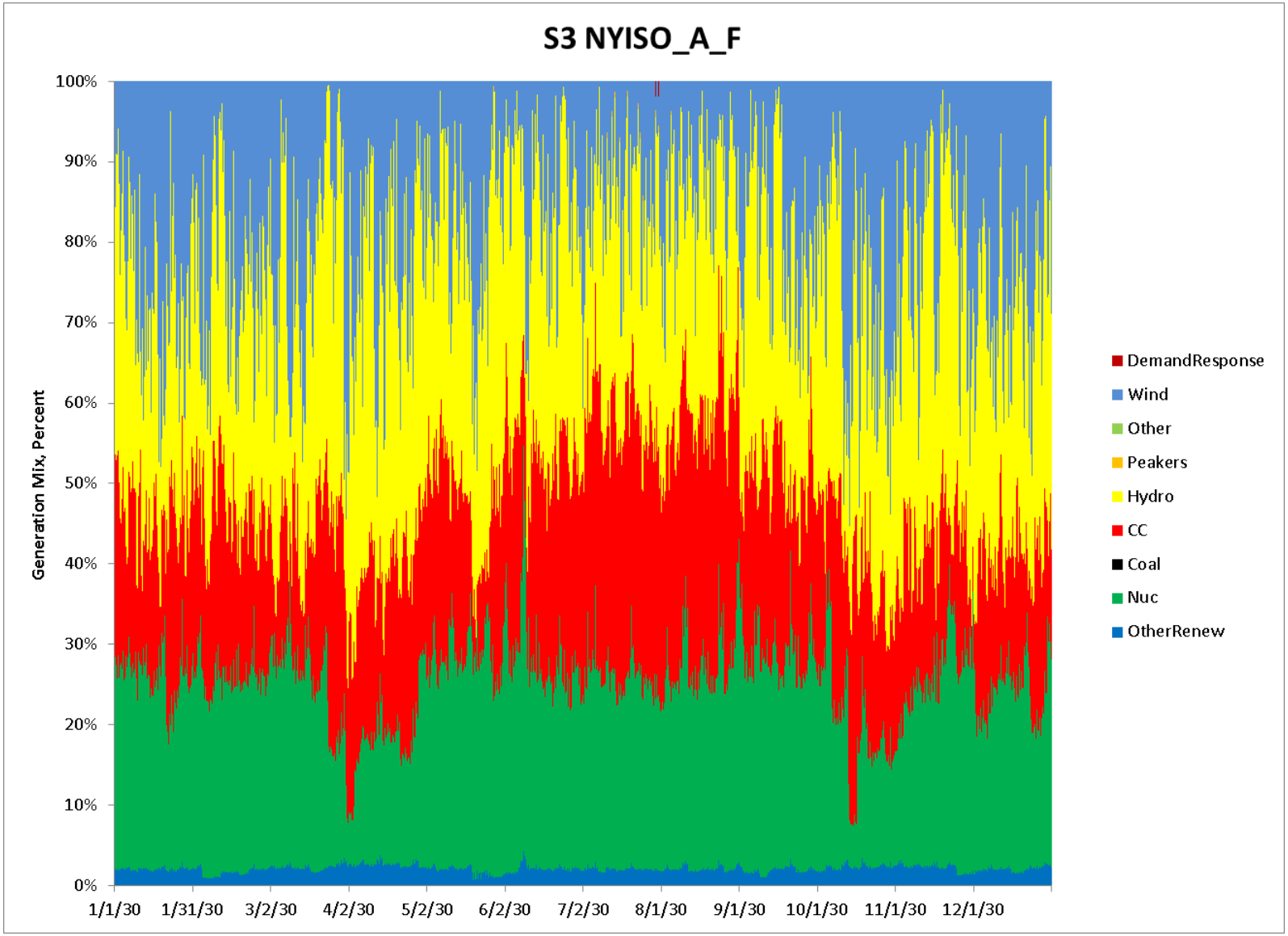
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

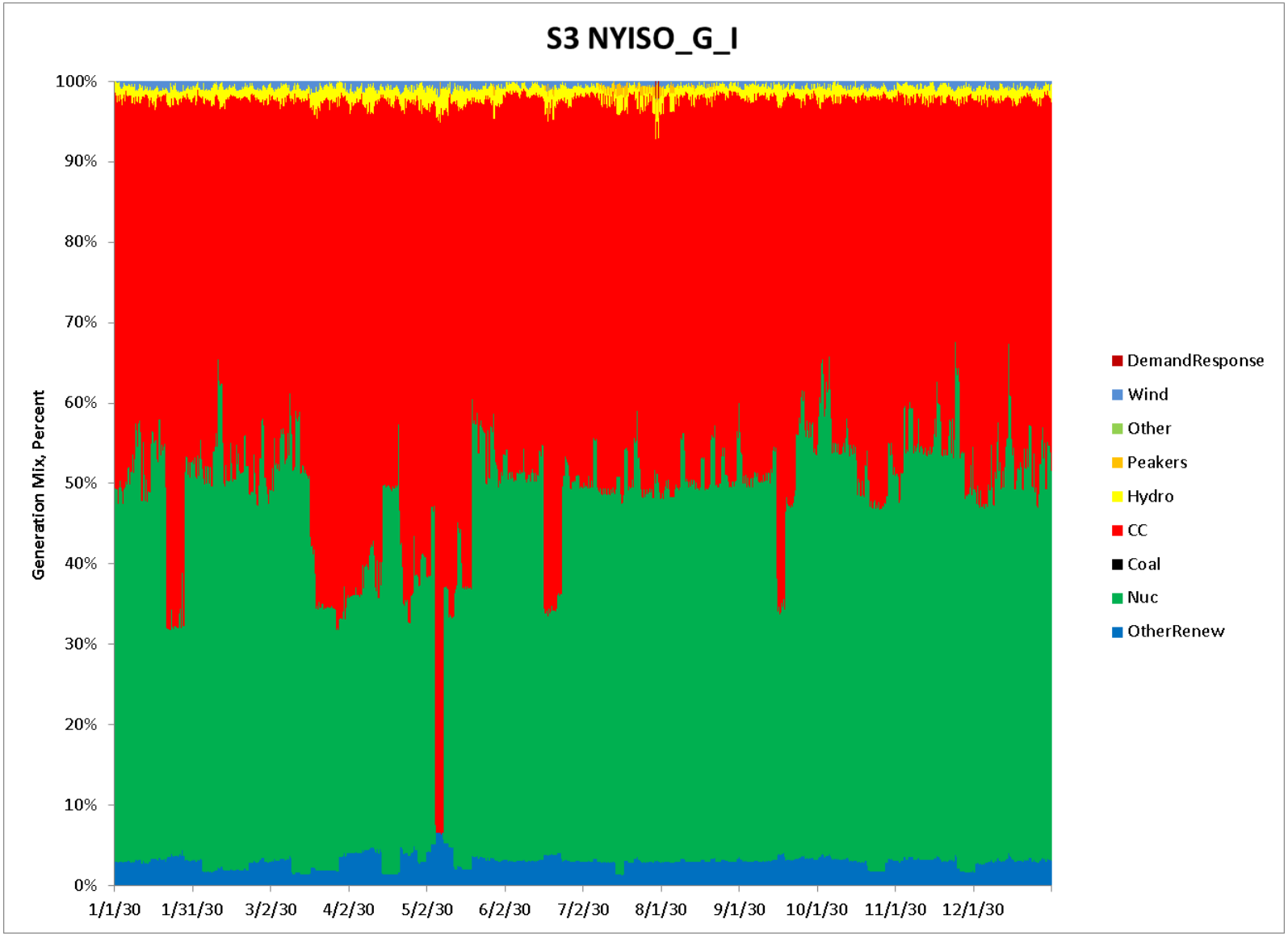

S3 MISO_WUMS
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

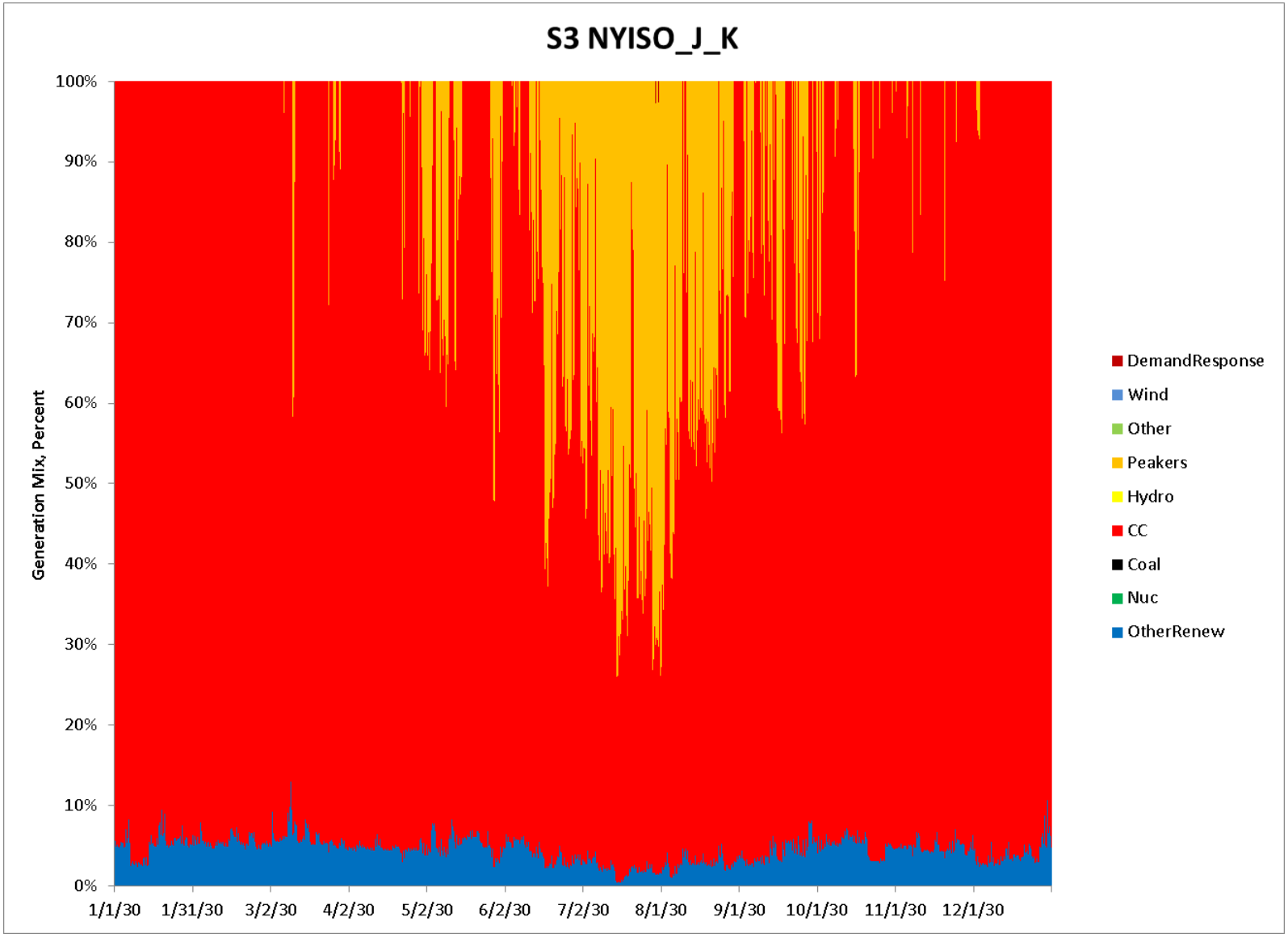

S3 NE
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

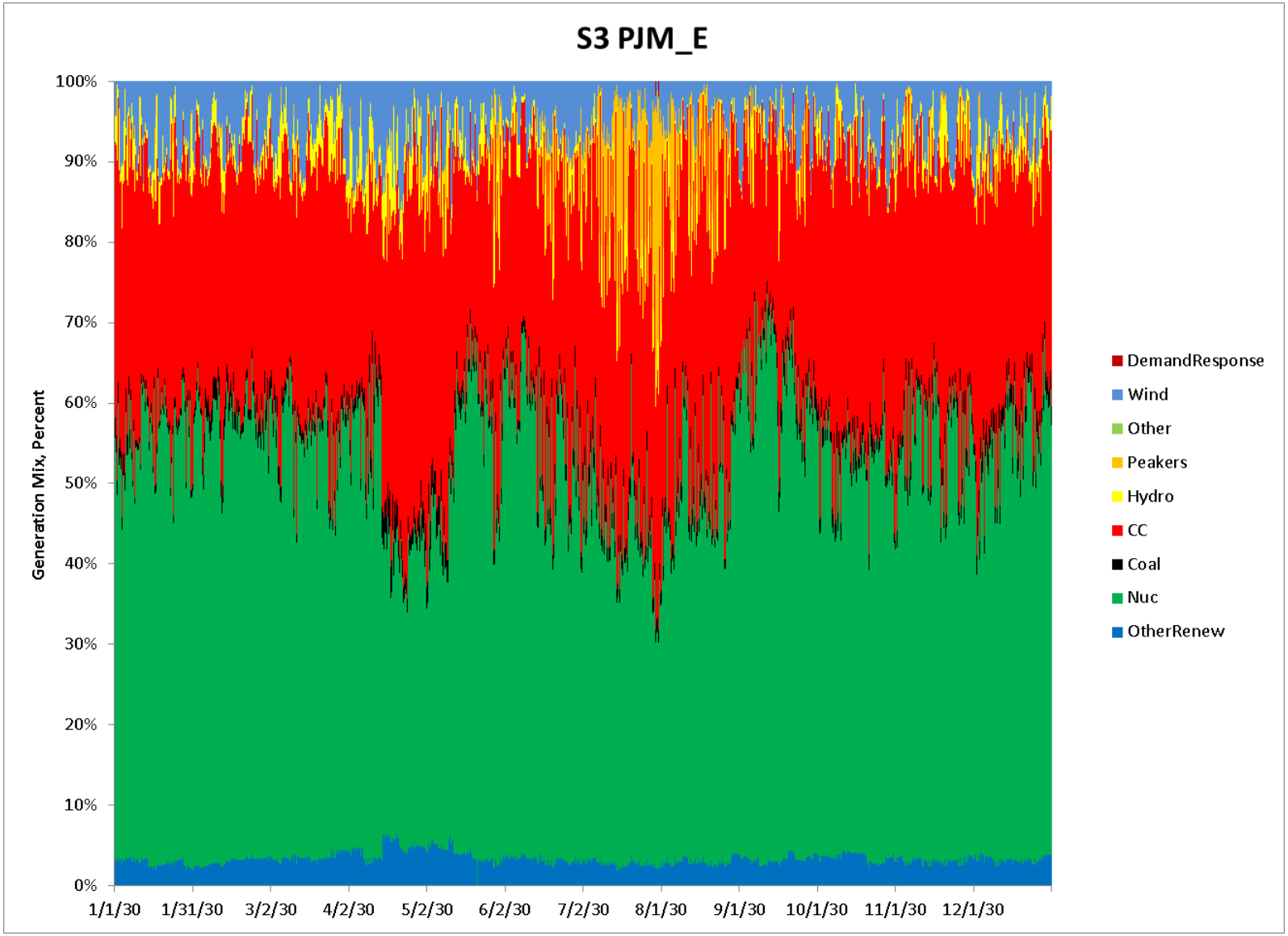

S3 NEISO
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew

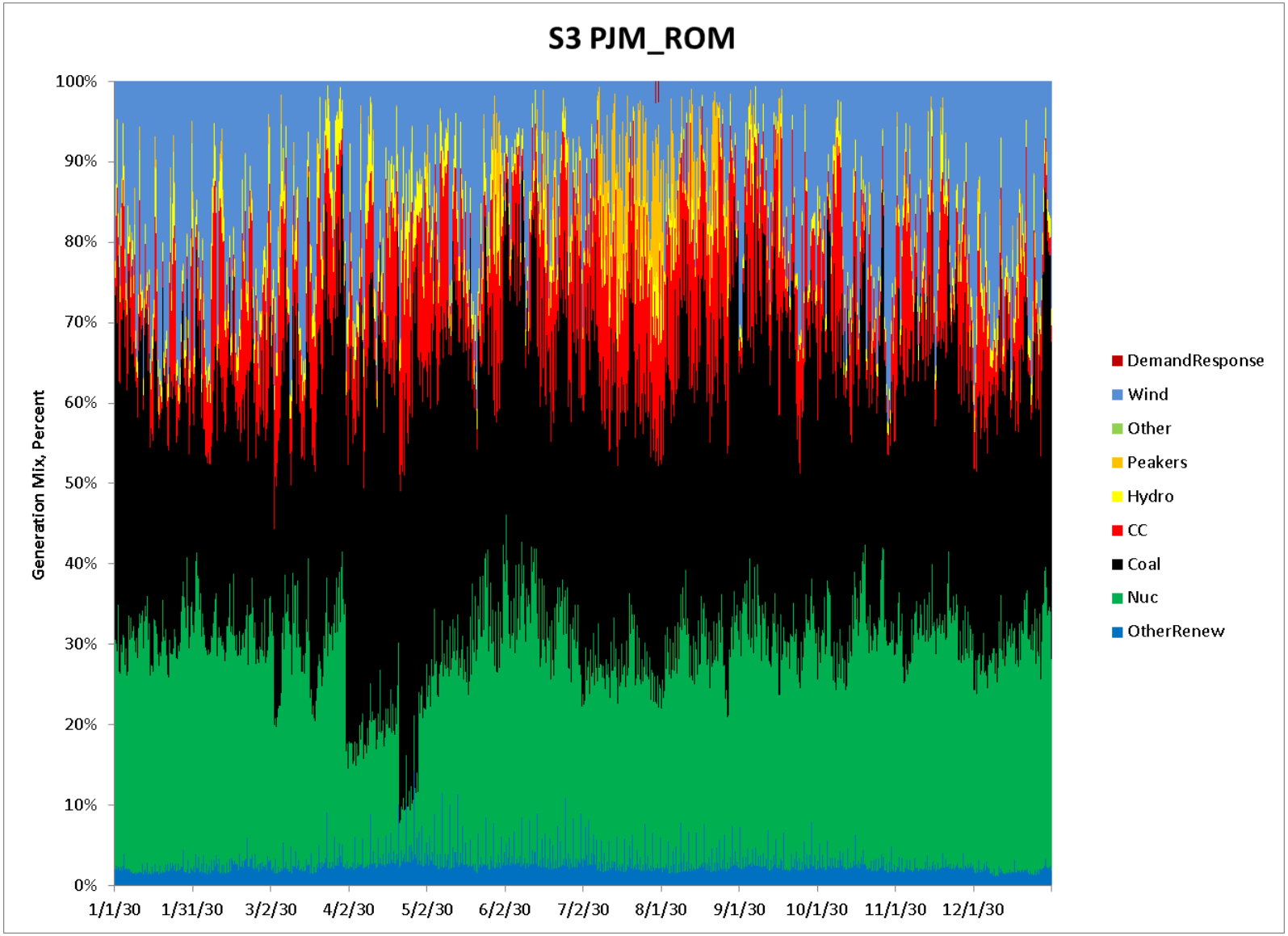

S3 NonRTO_Midwest
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 NYISO_A_F
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 NYISO_G_I
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 NYISO_J_K
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 PJM_E
Generation Mix, Percent
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1/1/30
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 PJM_ROM
Generation Mix, Percent
100%
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80%
70%
60%
50%
40%
30%
20%
10%
0%
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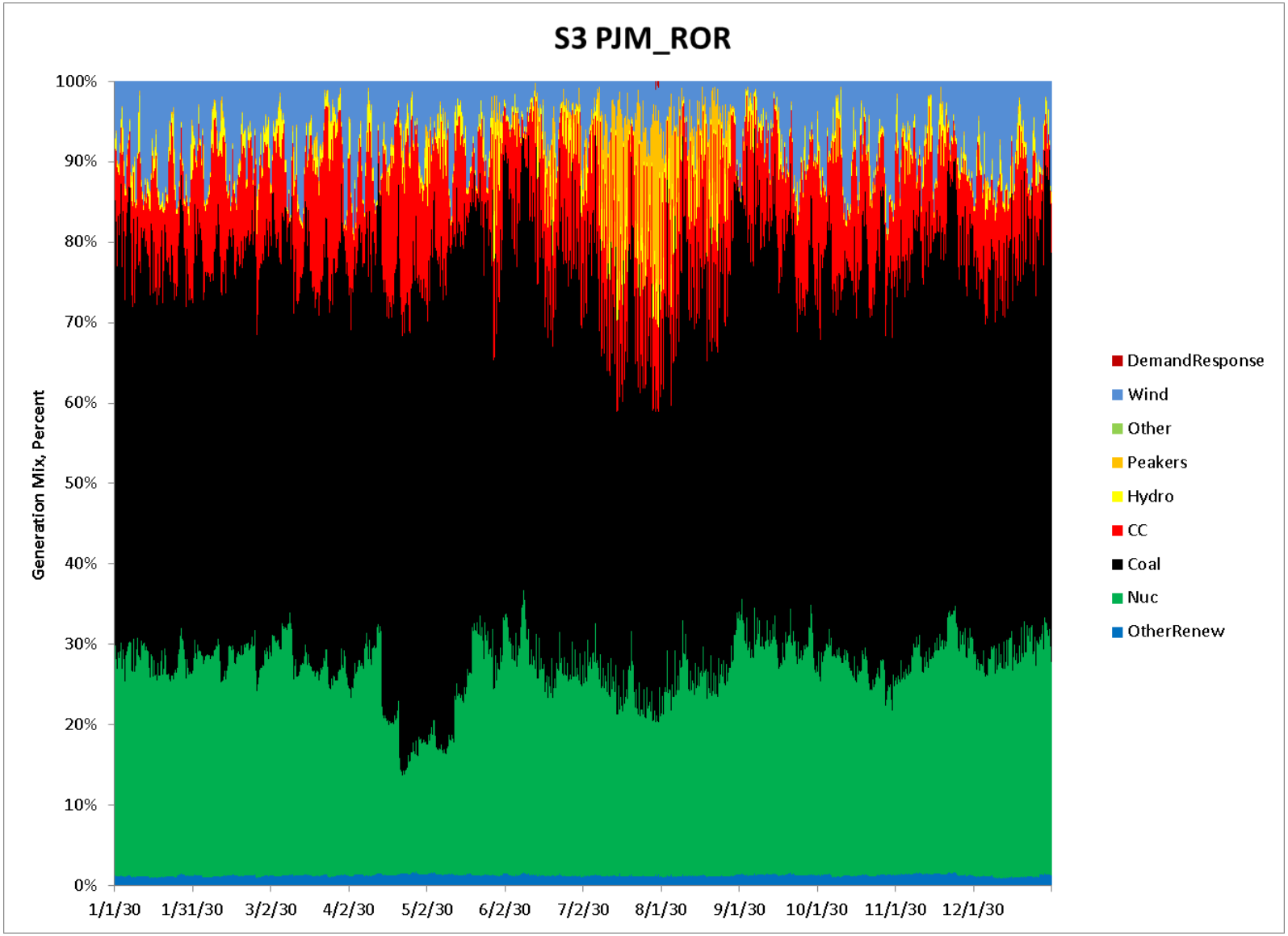
1/31/30
3/2/30
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew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0%
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1/31/30
3/2/30
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6/2/30
7/2/30
8/1/30
9/1/30
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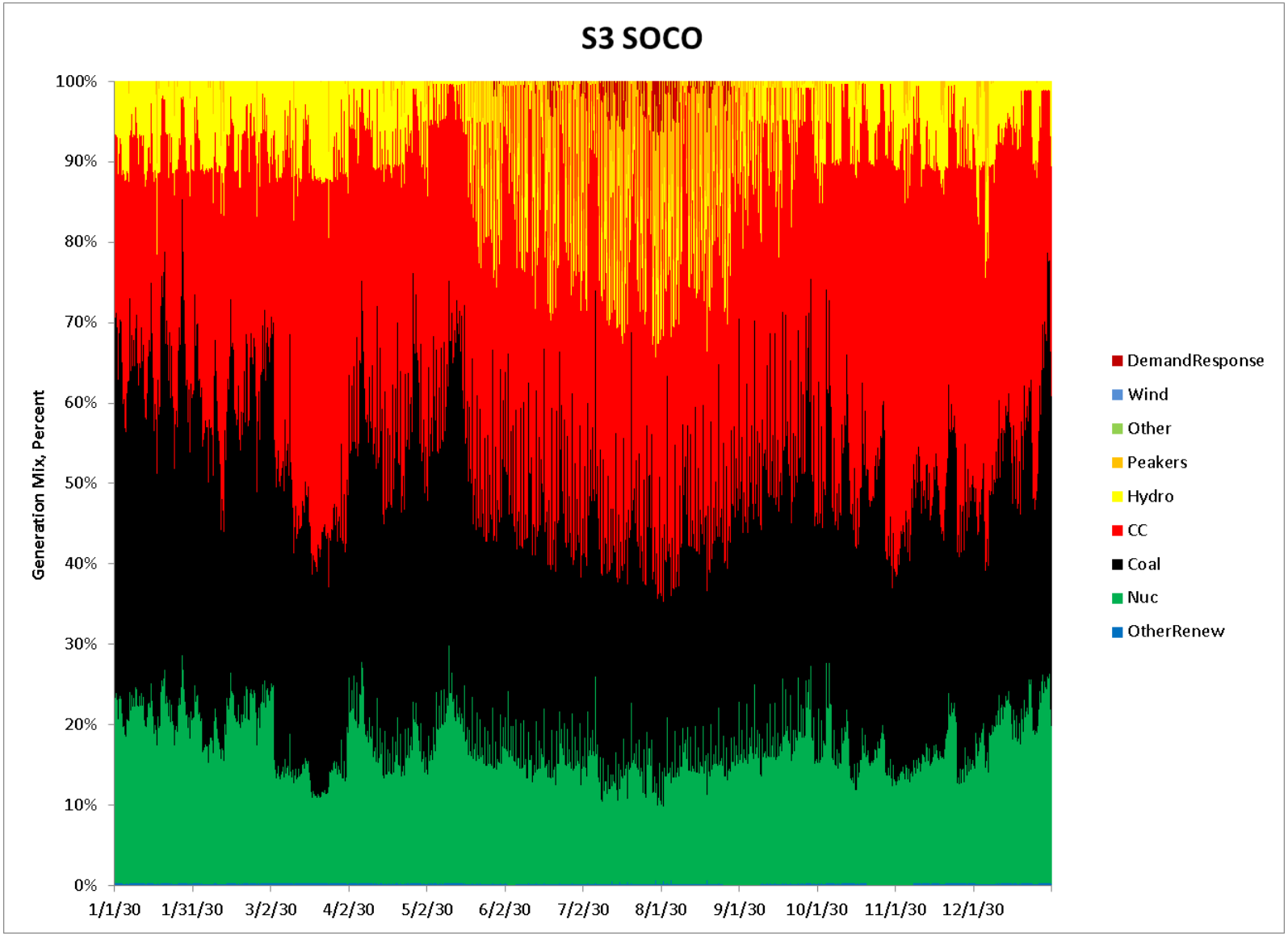
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew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40%
30%
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10%
0%
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3/2/30
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6/2/30
7/2/30
8/1/30
9/1/30
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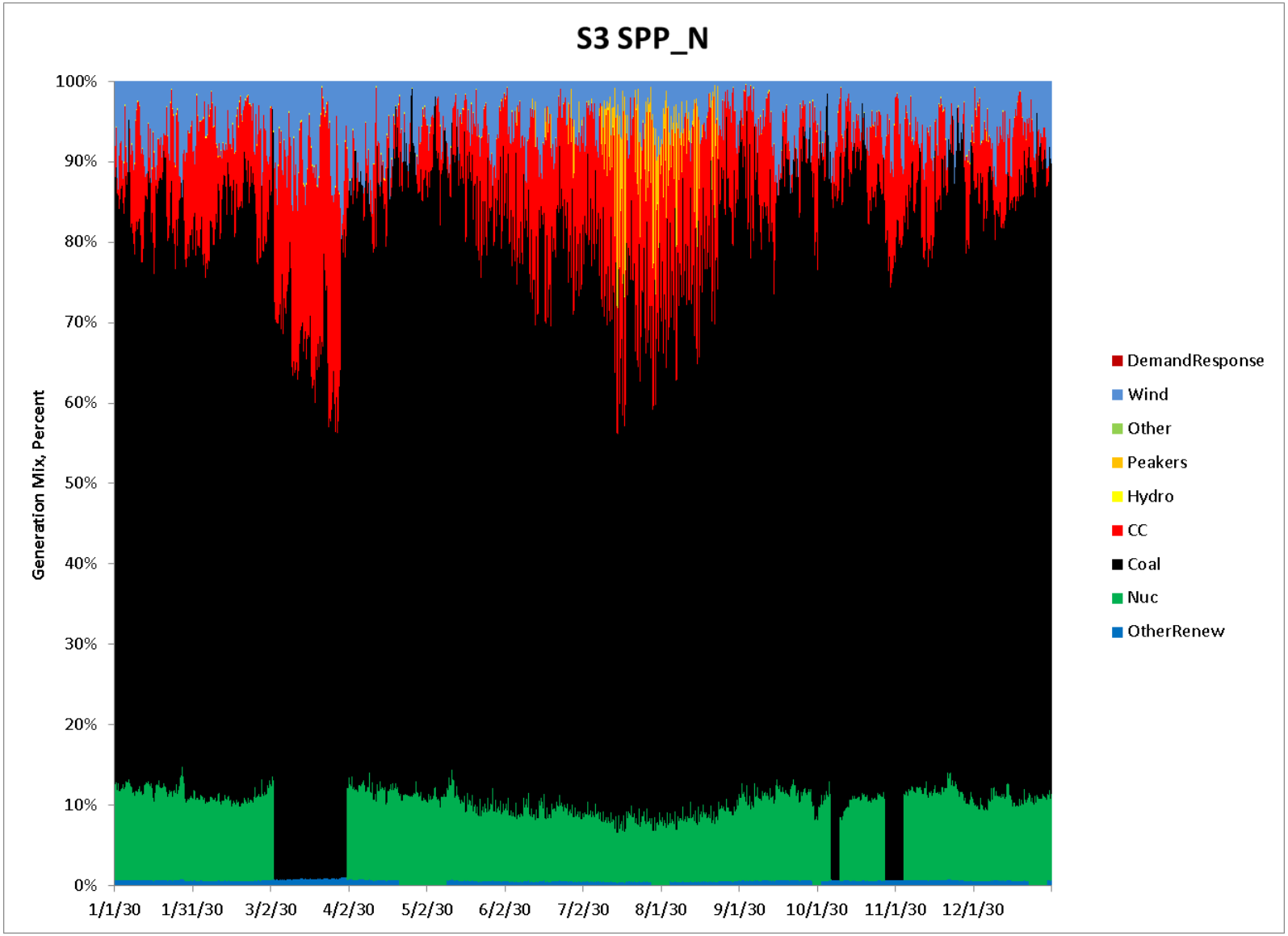
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 SPP_N
Generation Mix, Percent
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70%
60%
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40%
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20%
10%
0%
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1/31/30
3/2/30
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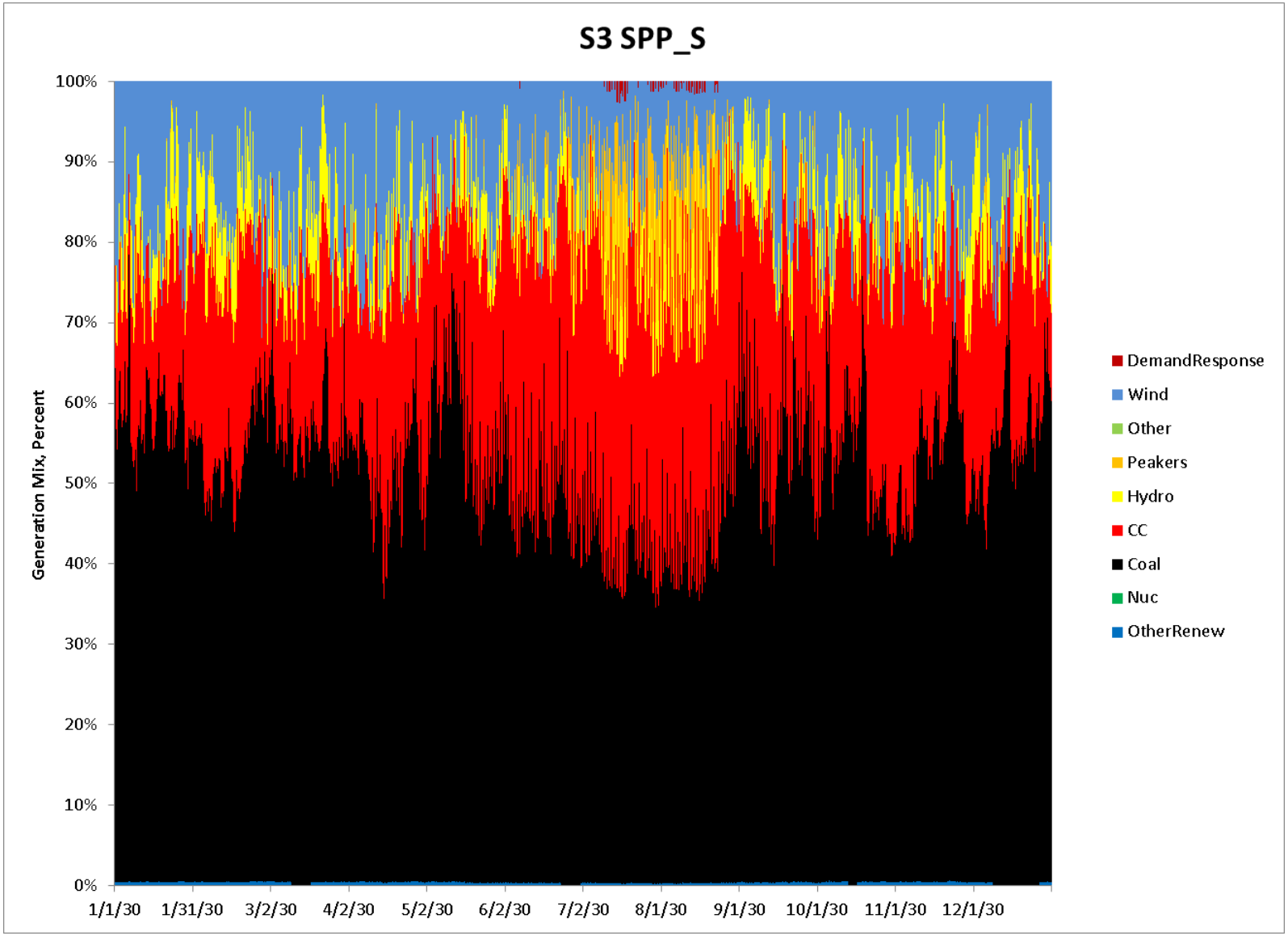
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew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0%
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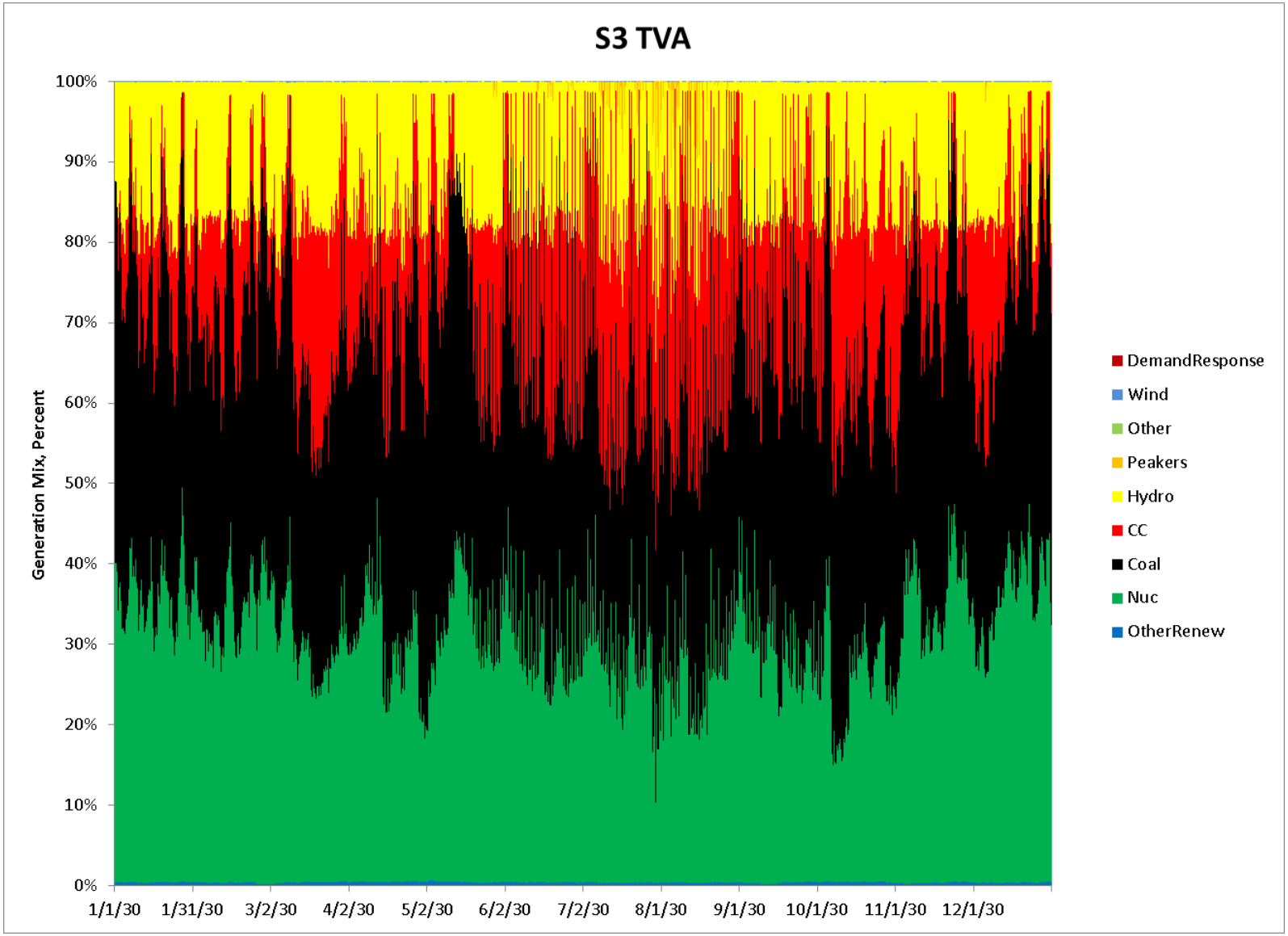
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 TVA
Generation Mix, Percent
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60%
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30%
20%
10%
0%
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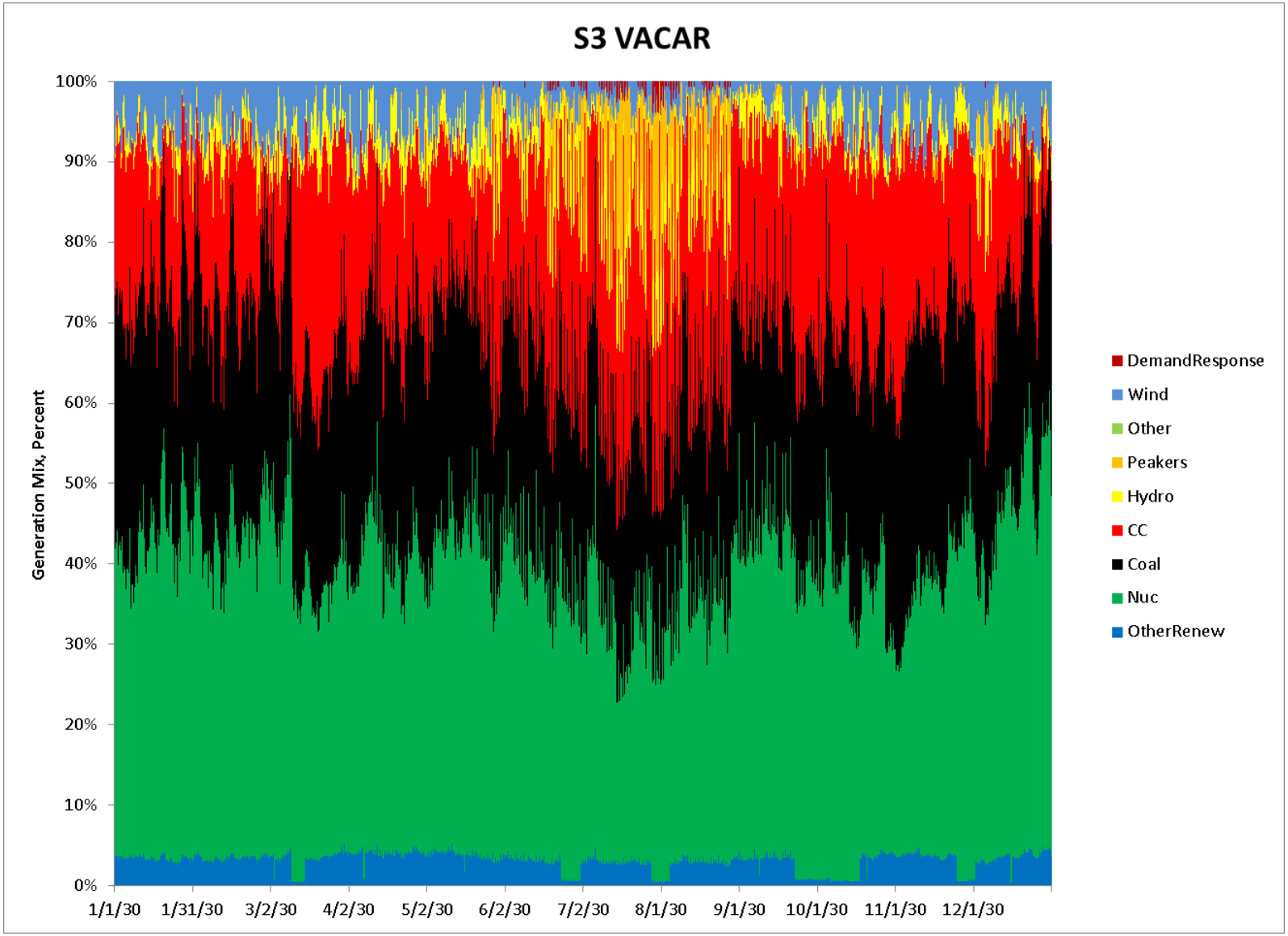
4/2/30
5/2/30
6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew


S3 VACAR
Generation Mix, Percent
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60%
50%
40%
30%
20%
10%
0%
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6/2/30
7/2/30
8/1/30
9/1/30
10/1/30
11/1/30
12/1/30
DemandResponse
Wind
Other
Peakers
Hydro
CC
Coal
Nuc
OtherRenew