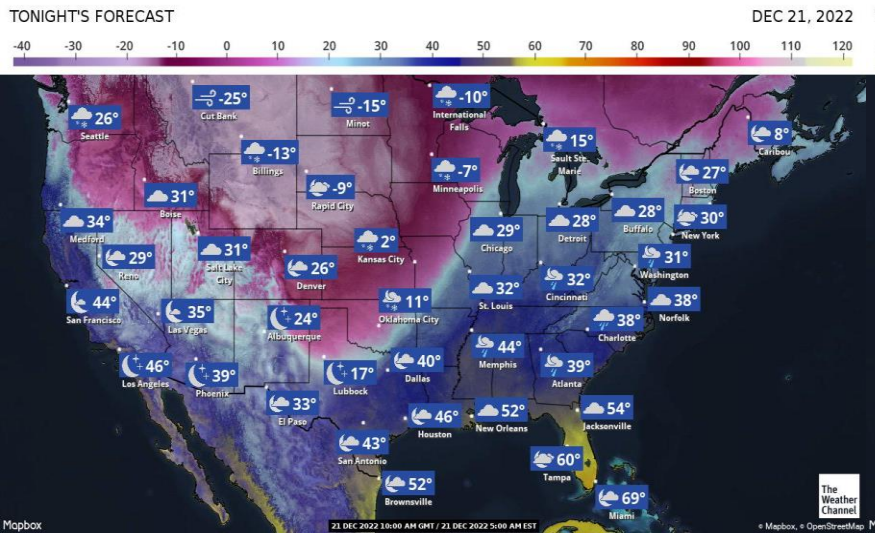
Energy Supply & Analysis

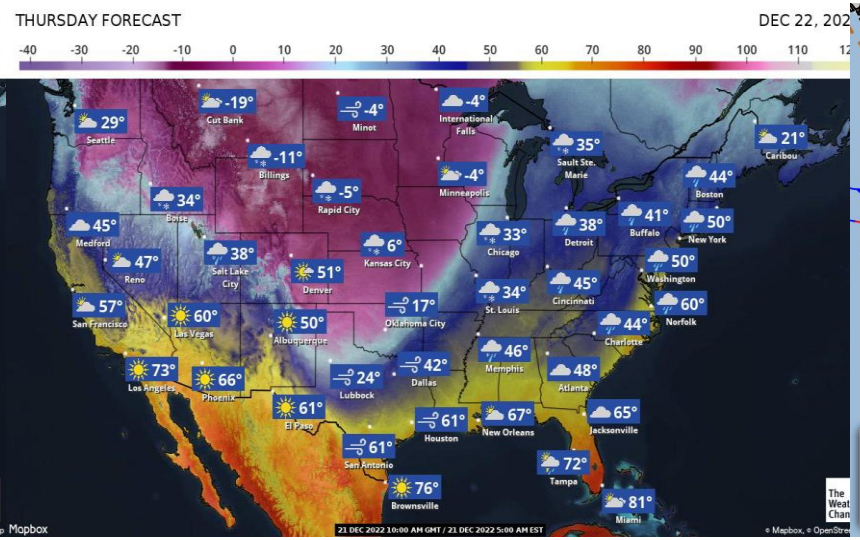
Power Supply Morning Meeting

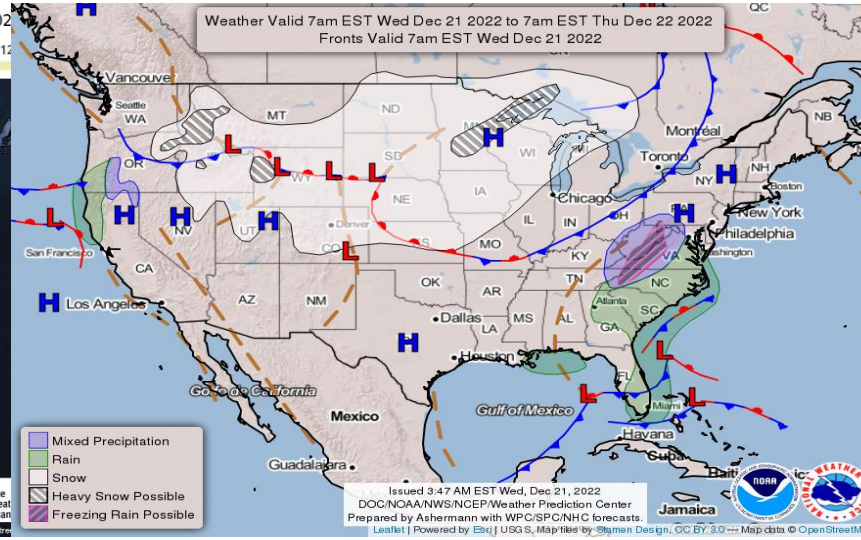
12/21/2022

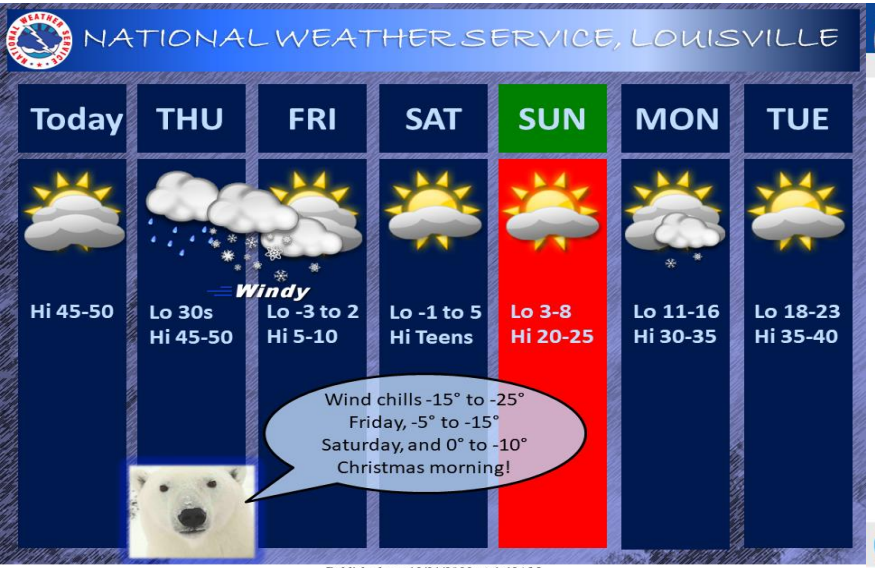
LGE-KU003_0001329

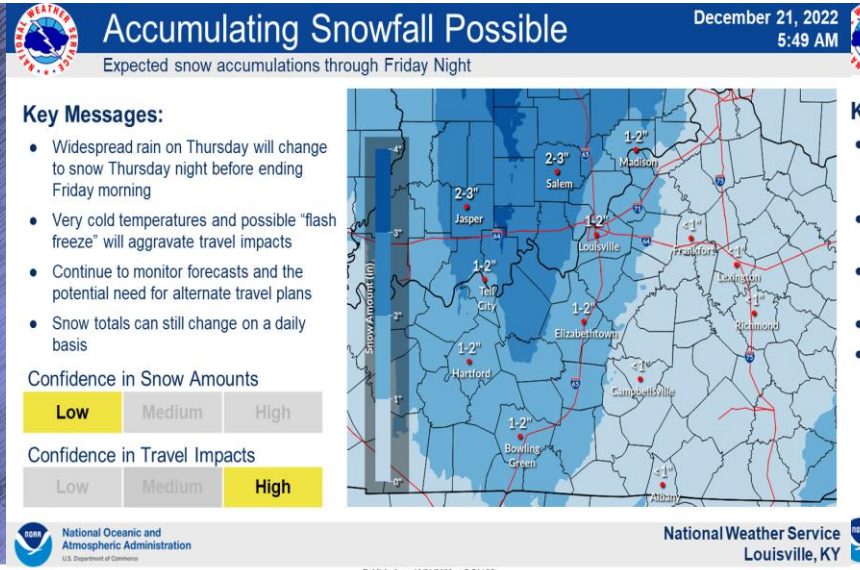
Weather Updates

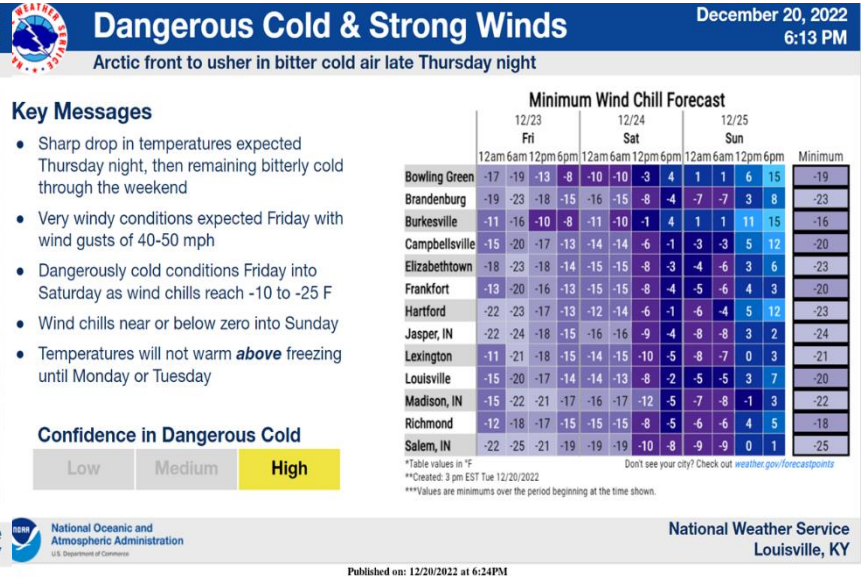












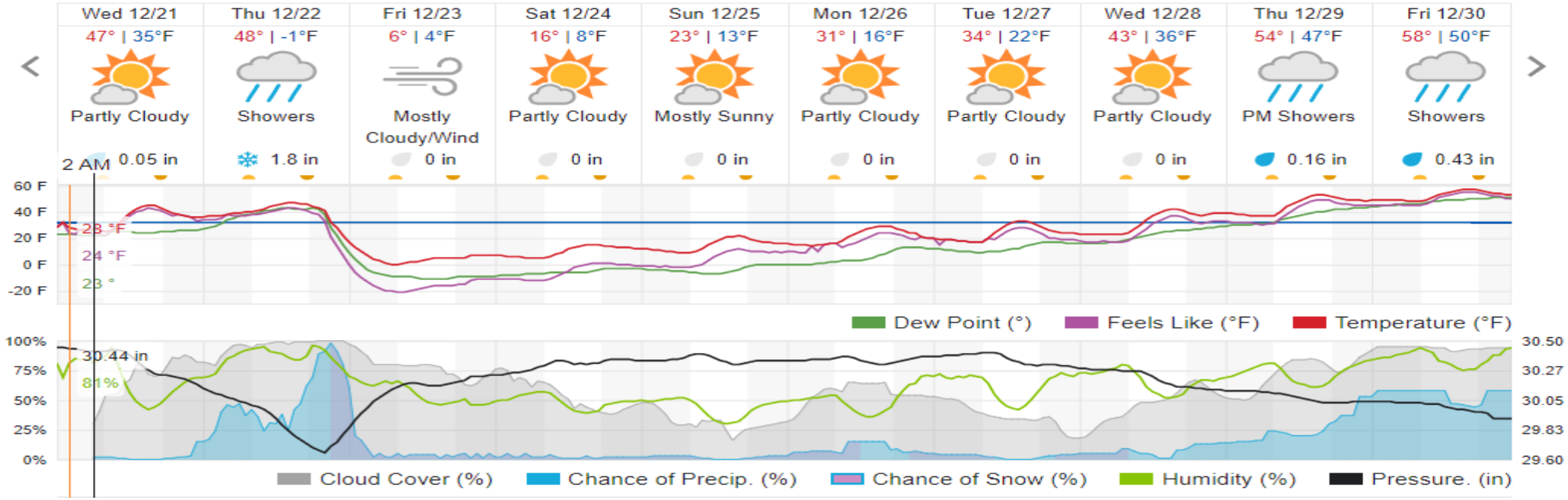
	12/23 Fri 12am	12/23 Fri 6am	12/23 Fri 12pm	12/23 Fri 6pm	12/24 Sat 12am	12/24 Sat 6am	12/24 Sat 12pm	12/24 Sat 6pm	12/25 Sun 12am	12/25 Sun 6am	12/25 Sun 12pm	12/25 Sun 6pm	Minimum
Bowling Green	-17	-19	-13	-8	-10	-10	-3	4	1	1	6	15	-19
Brandenburg	-19	-23	-18	-15	-16	-15	-8	-4	-7	-7	3	8	-23
Burkesville	-11	-16	-10	-8	-11	-10	-1	4	1	1	11	15	-16
Campbellsville	-15	-20	-17	-13	-14	-14	-6	-1	-3	-3	5	12	-20
Elizabethtown	-18	-23	-18	-14	-15	-15	-8	-3	-4	-6	3	6	-23
Frankfort	-13	-20	-16	-13	-15	-15	-8	-4	-5	-6	4	3	-20
Hartford	-22	-23	-17	-13	-12	-14	-6	-1	-6	-4	5	12	-23
Jasper, IN	-22	-24	-18	-15	-16	-16	-9	-4	-8	-8	3	2	-24
Lexington	-11	-21	-18	-15	-14	-15	-10	-5	-8	-7	0	3	-21
Louisville	-15	-20	-17	-14	-14	-13	-8	-2	-5	-5	3	7	-20
Madison, IN	-15	-22	-21	-17	-16	-17	-12	-5	-7	-8	-1	3	-22
Richmond	-12	-18	-17	-15	-15	-15	-8	-5	-6	-6	4	5	-18
Salem, IN	-22	-25	-21	-19	-19	-19	-10	-8	-9	-9	0	1	-25

Business Use
LGE-KU003_0001330
PPL companies

Louisville

High Temp	12/20	12/21	12/22	12/23	12/24	12/25	12/26	12/27
	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
WSI-SDF	49	46	48	15	16	23	30	36
Average High	44	44	44	44	43	43	43	43
Departure from Normal	5	2	4	-29	-27	-20	-13	-7

Low Temp	12/20	12/21	12/22	12/23	12/24	12/25	12/26	12/27
	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
WSI-SDF	31	26	20	1	6	10	16	20
Average Low	28	28	28	28	28	28	28	28
Departure from Normal	3	-2	-8	-27	-22	-18	-12	-8

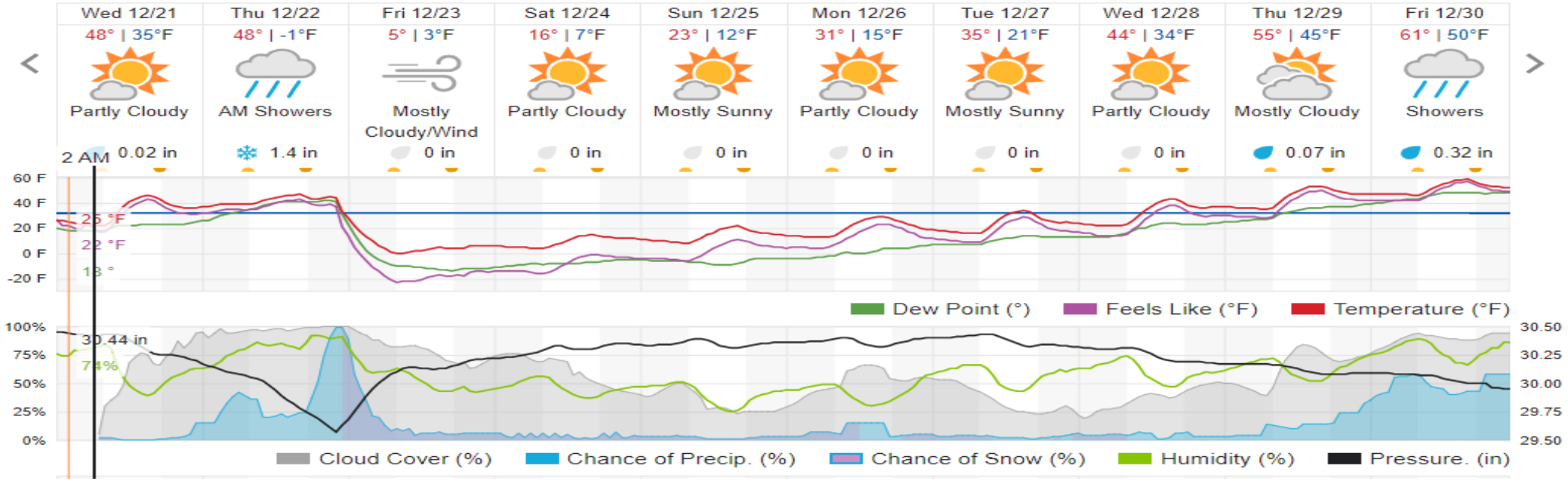


Business Use

Lexington

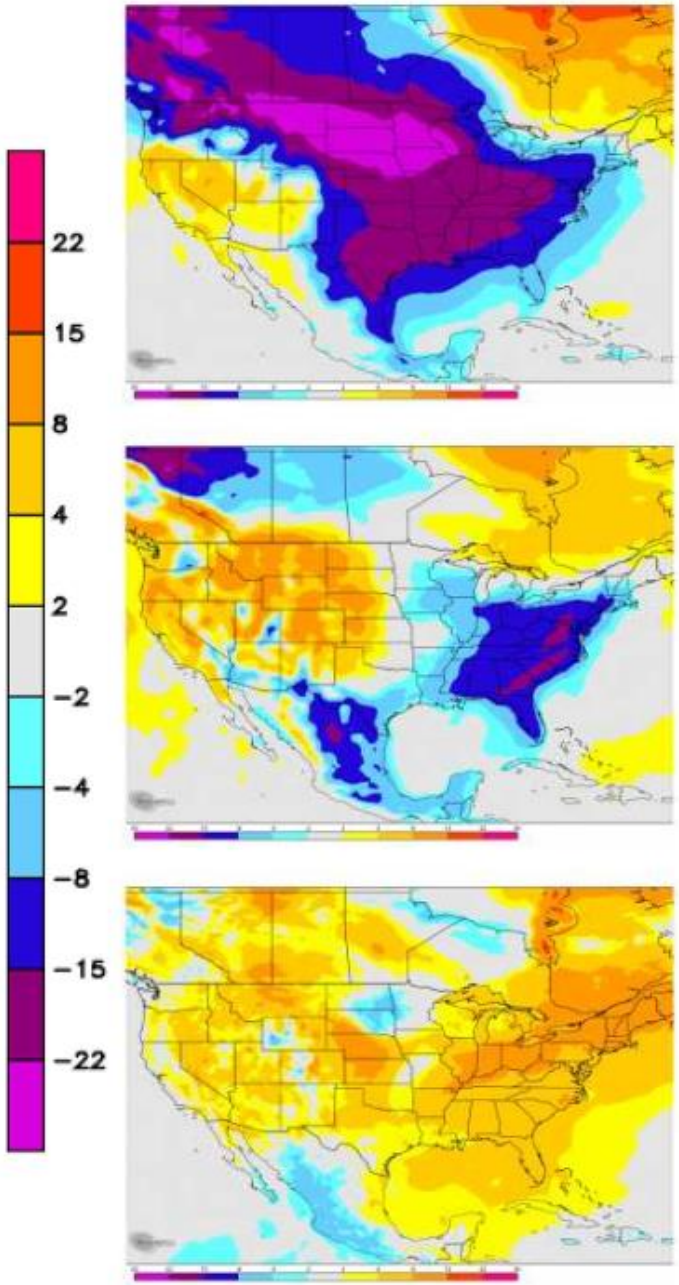
High Temp	12/20	12/21	12/22	12/23	12/24	12/25	12/26	12/27
	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
WSI-LEX	49	47	47	21	15	23	30	36
Average High	43	42	42	42	42	42	42	42
Departure from Normal	6	5	5	-21	-27	-19	-12	-6

Low Temp	12/20	12/21	12/22	12/23	12/24	12/25	12/26	12/27
	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
WSI-LEX	29	24	27	0	4	9	13	18
Average Low	27	27	27	26	26	26	26	26
Departure from Normal	2	-3	0	-26	-22	-17	-13	-8



Business Use

WeatherBELL Forecast



Days 1-5

CONFIDENCE: HIGH

Days 6-10

CONFIDENCE: HIGH

Days 11-15

CONFIDENCE: HIGH

Business Use

PPL companies

Fuels Update

• Natural Gas Updates

Current Gas Day

Location	Estimated FIFO	Spot Price	Spot Change from Previous Meeting	Gas Position (MMBtu)
TETCO				
E. W. Brown	$5.20	$5.20	-$0.50	1,434
TEXAS GAS				
Cane Run 7	$5.46	$5.10	-$0.50	145,653
Paddy's Run	$5.10	$5.10	-$0.50	5,472
Trimble County	$4.57	$5.10	-$0.50	115,363

Forward Gas Market

Jan	Henry Hub Natural Gas Futures
Previous Morning	$5.69
Current Price	$5.51
Change	($0.18)

• Coal Updates

Actuals thru:	Monday 12/19/2022				12/31/2022	Lowest	
Station	Tons	Days of Inventory	Change in Days		Projected EOM DOI	Future YR22 DOI	Date
Brown	180,025	45	▼	(1)	45	44	12/26/2022
Ghent	636,152	30	▬	0	33	29	12/21/2022
Mill Creek	464,421	32	▬	0	34	32	12/21/2022
Trimble HS	289,976	30	▲	1	35	31	12/20/2022
Trimble PRB	132,251	60	▬	0	59	58	12/29/2022
System	1,702,826	33	▬	0	36	33	12/20/2022

Business Use
LGE-KU003_0001334
PPL companies

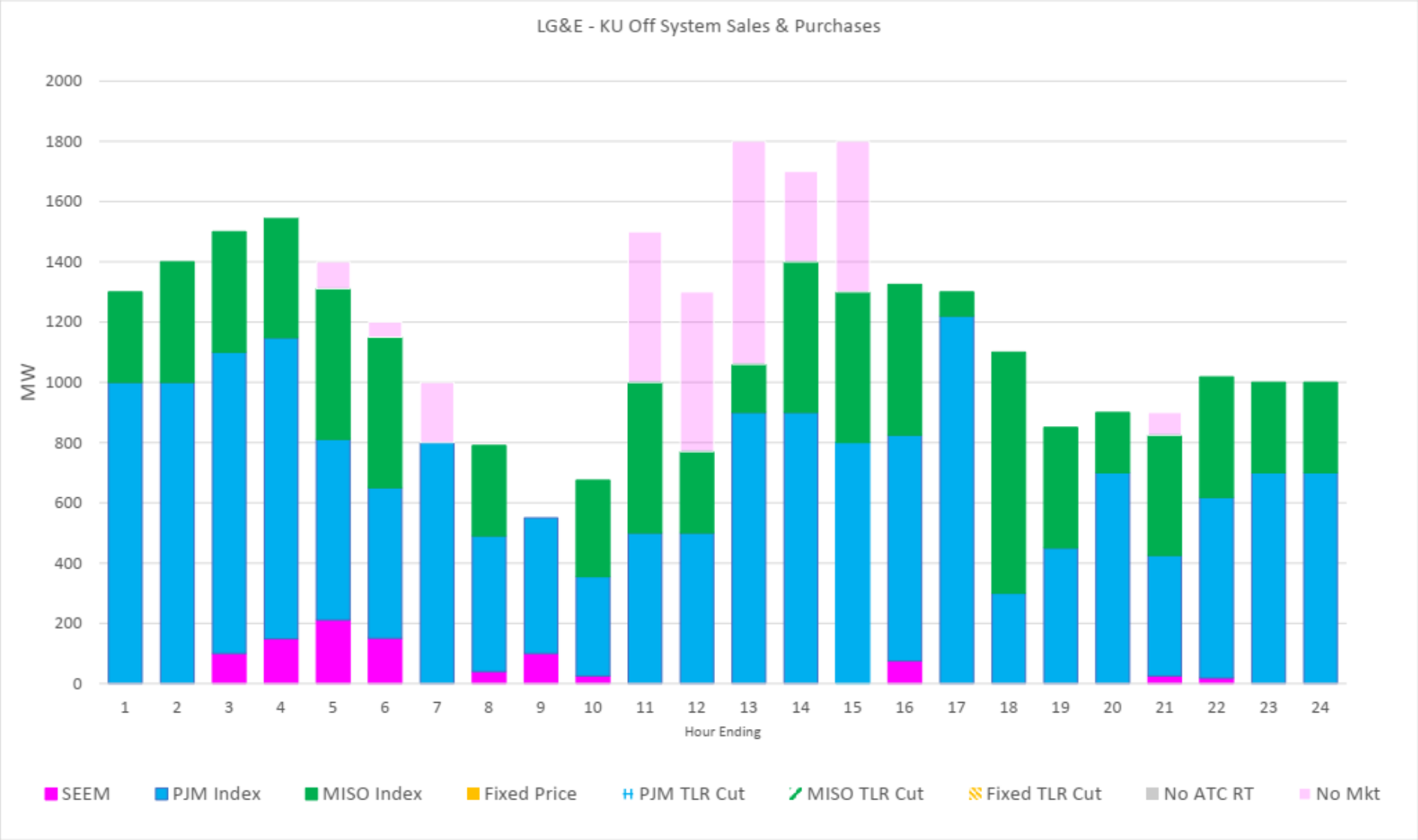
Hour Ending EST	Tuesday, December 20, 2022				Wednesday, December 21, 2022				Thursday, December 22, 2022			
	49/31		38/21		47/37		40/24		48/0		45/43	
	MISO-LGEE		PJM-SOUTH		MISO-LGEE		PJM-SOUTH		MISO-LGEE		PJM-SOUTH	
	DA	RT	DA	RT	DA	RT	DA	RT	DA	RT	DA	RT
1	72	55	74	75	79	209	65	60	51	45	59	53
2	64	53	69	34	68	65	63	66	45	42	58	56
3	64	60	67	57	69	83	61	63	43	45	57	54
4	61	55	69	40	68	68	62	61	42	44	57	49
5	62	54	73	68	66	60	64	60	44	42	58	64
6	62	61	84	68	71	56	65	59	49	45	60	66
7	72	64	100	83	77	70	83	75	55	53	69	69
8	90	66	129	100	94	90	103	90	72	61	78	72
9	81	72	97	78	86	85	75	80	67	94	78	80
10	83	60	86	67	84	80	66	70	61	51	76	102
11	81	58	74	58	76	78	62	65	59	45	67	87
12	81	60	70	57	73	80	59	60	56	48	62	79
13	77	57	66	53	68	75	58	60	56	46	61	65
14	70	51	64	52	68	75	56	55	55	48	59	109
15	68	48	63	53	67	72	54	55	55	50	59	73
16	70	52	65	51	64	70	55	55	57	51	58	60
17	74	55	71	57	64	74	59	58	64	54	60	56
18	96	68	93	102	77	80	72	70	78	75	70	75
19	88	73	82	84	72	80	64	65	77	75	75	85
20	83	74	85	73	68	78	62	60	72	80	75	75
21	83	67	80	72	60	78	60	60	72	80	70	75
22	86	67	76	80	54	69	57	55	62	75	75	70
23	76	76	70	64	52	68	52	55	59	75	65	70
24	80	85	66	60	50	65	51	55	54	70	65	70

averages												
ON	80	63	79	68	70	77	63	63	64	63	68	77
OFF	67	61	75	61	68	85	64	62	48	48	60	60

Business Use

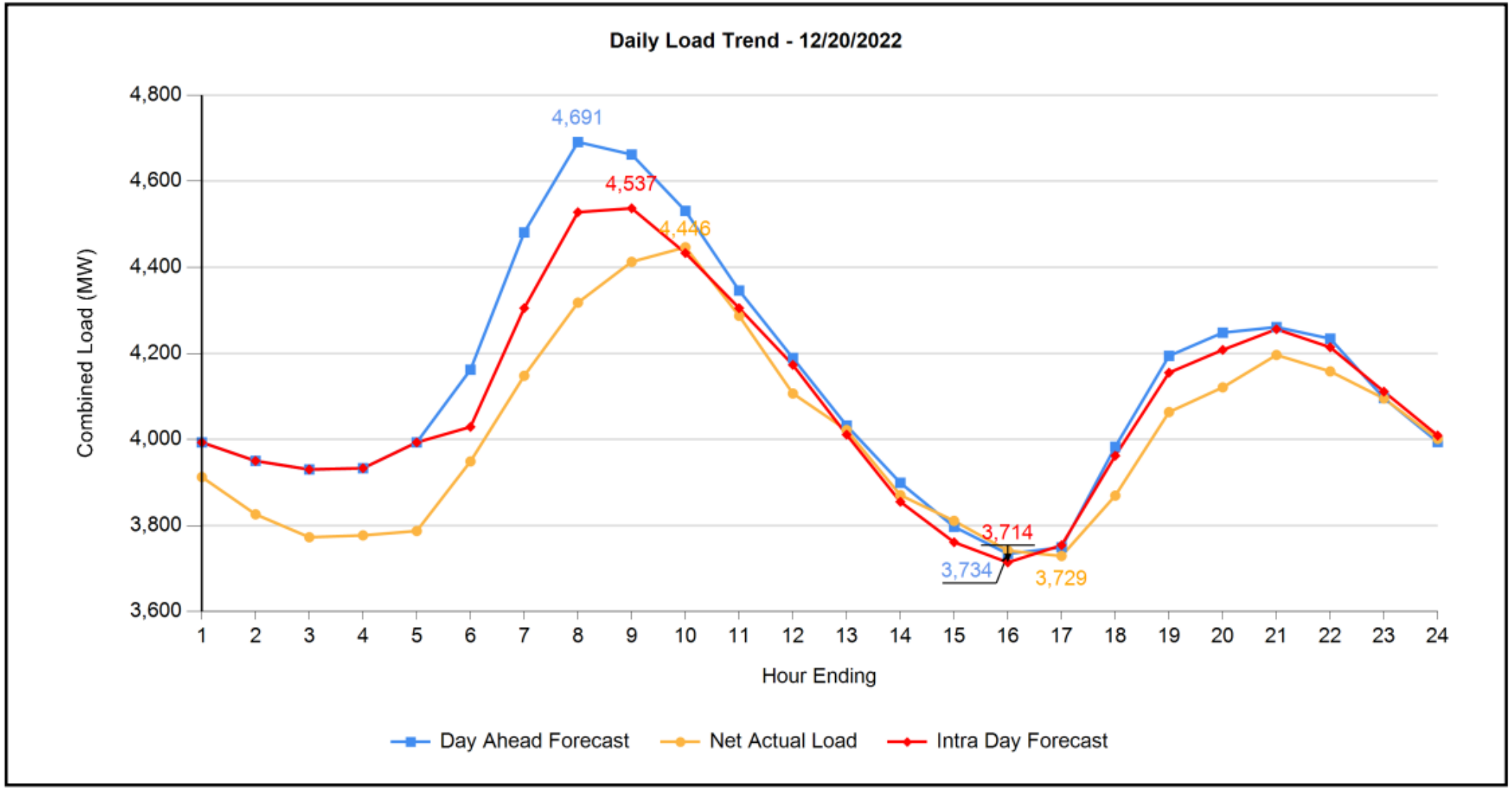
PPL companies

Tuesday, December 20, 2022



Business Use

GDLF Dashboard



12/20/2022		
	Max Net Load	Hour
LGE	1,486	10
KU	2,960	10
Combined	4,446	10

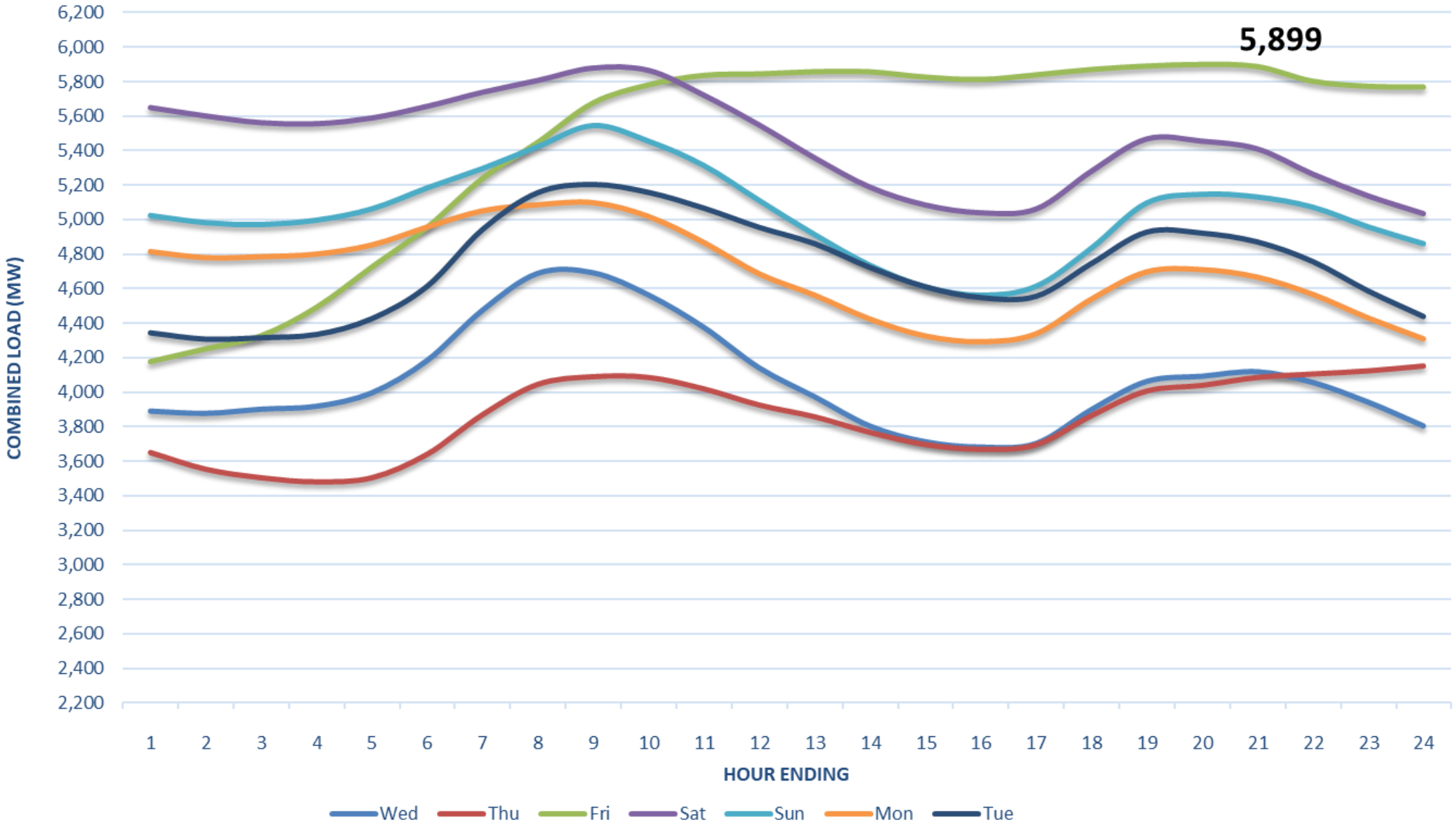
	Min Net Load	Hour
LGE	1,234	3
KU	2,418	17
Combined	3,729	17

	Total Net Load
LGE	32,877
KU	63,543
Combined	96,420

Daily SDAF MAPE (Peak)	1.9015
Daily SDAF MAPE	2.7891
Monthly SDAF MAPE	2.6604
Yearly SDAF MAPE	2.9468

Business Use
LGE-KU003_0001337
PPL companies

7 Day Load Forecast



Business Use

LGE-KU003_0001338

Fleet Update

Unit	Date	12/21	12/22	12/23	12/24	12/25	12/26	12/27	12/28	12/29	12/30	12/31	1/1	1/2	1/3
	Day	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
BR-3	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416
GH-1	479	479	479	479	479	479	479	479	479	479	479	479	479	479	479
GH-2	486	486	486	486	486	486	486	486	486	486	486	486	486	486	486
GH-3	476	476	476	476	476	476	476	476	476	476	476	476	476	476	476
GH-4	478	478	478	478	478	478	478	478	478	478	478	478	478	478	478
MC-1	300	0	300	300	300	300	300	300	300	300	300	300	300	300	300
MC-2	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297
MC-3	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394
MC-4	486	486	486	486	486	486	486	486	486	486	486	486	486	486	486
TC-1	493	493	493	493	493	493	493	493	493	493	493	493	493	493	493
TC-2	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760
OF	40	39	32	32	32	32	32	32	40	40	40	40	40	40	40
BR-5	130	R	R	130	130	R	R	R	R	R	R	R	R	R	R
BR-6	171	R	R	171	171	171	R	R	R	R	R	R	R	R	R
BR-7	171	R	R	171	171	171	171	R	R	R	R	R	R	R	R
BR-9	138	FS	FS	138	138	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
BR-10	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BR-11	128	FS	FS	FS	FS	128	FS	FS	FS	FS	FS	FS	FS	FS	FS
CR-7-1	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
CR-7-2	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
CR-ST	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231
PR-13	175	R	R	R	R	R	R	R	R	R	R	R	R	R	R
TC-5	179	R	R	179	179	179	R	R	R	R	R	R	R	R	R
TC-6	179	R	R	179	179	179	179	R	R	R	R	R	R	R	R
TC-7	179	R	R	179	179	179	179	R	R	R	R	R	R	R	R
TC-8	179	179	FS	179	179	179	179	FS	FS	FS	FS	FS	FS	FS	FS
TC-9	179	R	179	R	179	179	179	R	R	R	R	R	R	R	R
TC-10	179	FS	FS	179	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
Peak Hour		9:00	0:00	20:00	9:00	9:00	9:00	9:00							
		Net	Net	Net	Net	Net	Net	Net	Net	Net	Net	Net	Net	Net	Net
On Line Base Capacity		5487	5780	5780	5780	5780	5780	5780	5788	5788	5788	5788	5788	5788	5788
Projected Net Peak Load		4691	4149	5899	5881	5544	5101	5202	5007	4505	3938	3372	3293	3701	3833
JOU Schedules		161	161	161	161	161	161	161	161	161	161	161	161	161	161
JOU Pseudo-Tie		152	152	152	152	152	152	152	152	152	152	152	152	152	152
OVEC Import		156	156	159	159	159	159	159	159	159	159	159	159	159	159
Load Obligation		4848	4306	6053	6035	5698	5256	5356	5161	4659	4092	3526	3447	3855	3987
Position before Res & Int		639	1474	(273)	(255)	82	524	424	627	1129	1696	2262	2341	1933	1801
Projected OSS/OSP Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spinning Reserve Target		318	318	318	318	318	318	318	318	318	318	318	318	318	318

Business Use

PPL companies

Unit	Date	12/21	12/22	12/23	12/24	12/25	12/26	12/27	12/28	12/29	12/30	12/31	1/1	1/2	1/3
	Day	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
Base Load On Line Position		321	1156	(591)	(573)	(236)	206	106	309	811	1378	1944	2023	1615	1483
Base Reserve Resources		32	32	32	32	32	32	32	32	32	32	32	32	32	32
Base On Line Position w/base reserves		353	1188	(559)	(541)	(204)	238	138	341	843	1410	1976	2055	1647	1515
Online Capacity		5666	5959	7285	7285	7145	6667	5780	5788	5788	5788	5788	5788	5788	5788
Position w/Online CT's		500	1335	914	932	1129	1093	106	309	811	1378	1944	2023	1615	1483
PRI CT Reserve		1936	1936	610	610	750	1228	2115	2115	2115	2115	2115	2115	2115	2115
Net On Line Position and all stand by CT's		2488	3323	1576	1594	1931	2373	2273	2476	2978	3545	4111	4190	3782	3650
Primary CT Reserve Margin incl Position		51.92%	78.83%	25.83%	26.22%	33.89%	45.51%	42.69%	48.41%	64.94%	88.69%	120.37%	125.65%	100.78%	93.86%
Total Net Reserve Margin incl Secondary's		53.03%	80.09%	26.71%	27.10%	34.83%	46.53%	43.69%	49.45%	66.10%	90.01%	121.91%	127.23%	102.18%	95.22%
Spinning Reserve Target		318	318	318	318	318	318	318	318	318	318	318	318	318	318
BR CT 8-9 Quick Start available		100	100	100	100	100	100	100	100	100	100	100	100	100	100
BR CT 10-11 Quick Start available		100	100	100	100	0	100	100	100	100	100	100	100	100	100
TC CT 8 Fast Start available		0	100	0	0	0	0	100	100	100	100	100	100	100	100
TC CT 10 Fast Start available		100	100	0	100	100	100	100	100	100	100	100	100	100	100
		618	718	518	618	518	618	718	718	718	718	718	718	718	718
		243	243	243	243	243	243	243	243	243	243	243	243	243	243
15- minute Res > CRR		375	475	275	375	275	375	475	475	475	475	475	475	475	475
Operating Reserve Planned		318	318	318	318	318	318	318	318	318	318	318	318	318	318
15-minute Res > OR Planned		300	400	200	300	200	300	400	400	400	400	400	400	400	400
Model		M	M	M	M	M	M	E							
A = ANNSTLF		4679	4089	5887	6362	5502	5066	5304							
S = Similar Day		4679	4089	5887	5897	5397	5066	5304							
E = eLoad		4747	4103	5851	5731	5451	5211	5202							
M = Manual		4691	4149	5899	5881	5544	5101	5202	Predicted Net peak						
Average of Models		4702	4094	5875	5997	5450	5114	5270							
Forecast variance from average		(11)	55	24	(116)	94	(13)	(68)							

Business Use

PPL companies

Meeting Actions

Y	Projected Resource Capacity is sufficient to meet the Projected Load Obligation. The Projected excess energy may be sold in the market.
N	Concerns were raised in the meeting as to the Projected Resource Capacity available due to Fuel, Re-dispatch, and/or Available Transmission Capacity.
N	Projected Resources Capacity is not sufficient to meet the Projected Load Obligation (notes below as applicable).
N	Generation ALERT discussion necessary
N	Staffing adjustment discussion necessary
N	LG&E - KU BA-TO and RC contact required
	If so, Date / Time of BA Contact:
	If so, Date / Time of RC Contract:

Business Use
LGE-KU003_0001341
PPL companies