

**ERCOT OPERATIONS REPORT  
ON THE  
EECP EVENT  
OF  
FEBRUARY 25, 2003**

## **Emergency Operations – February 25, 2003**

### **Summary**

During Cold Weather in Texas, along with Freezing Drizzle and Sleet, there were gas curtailments to generating units throughout the state. Freezing temperatures were observed as far south as San Antonio. ERCOT began to experience deficient Balancing Energy Service (BES) Bids simultaneously with reports of gas curtailments on Monday February 24<sup>th</sup>. ERCOT issued a Market Alert on the 24<sup>th</sup>, after detecting an insufficiency of BES Bids. Verbal Dispatch Instructions (VDI's) were issued with the intent to increase available energy and capacity, and Reliability Must Run (RMR) units were raised to maximum outputs. At 11:00 on the 24<sup>th</sup>, an OCN was issued for Operating Day 2/25/03 citing probable gas curtailments and cold weather.

On the 25<sup>th</sup>, temperatures in Dallas and Austin did not rise above freezing. By 06:45, ERCOT was deploying all procured Non-spinning Reserve Service (NSRS) and 100% of available BES in all zones. Three generating units loaded to a total of 745 MW's tripped at 11:30 due to a loss of gas supply, frequency dropped to 59.82. The decision to enter EECF Step 1 was made after ERCOT Operations determined that frequency was not recovering following the disturbance and was remaining at 59.81 Hz. At 12:01, ERCOT declared EECF Step 1, which remained in effect until 19:30.

### **Events of February 25, 2003**

At 02:45, the ERCOT Shift Supervisor issued a Market and Weather Advisory citing gas curtailments and inclement weather (several QSEs had called notifying ERCOT of impending gas curtailments). On the 24<sup>th</sup> the ERCOT forecasted peak for the 25<sup>th</sup> was 41,975 MW's. On the 25<sup>th</sup>, the ERCOT forecasted peak increased to 44,192 MW's, a 5.28% increase. The unofficial ERCOT Peak was 42,701 MW's at 18:00 on the 25<sup>th</sup>, with a morning peak of 42,263 MW's at 10:00 (unofficial).

At 07:00 ERCOT issued a Transmission Alert for exceeding the local Morgan to East Transfer Limit [REDACTED], in recognition of the need for deployment of generation in West Texas. At 07:30, 100% of the available Balancing Energy had been deployed. A Market Advisory was issued, requesting more BES Bids. NSRS purchased on the 24<sup>th</sup> was fully deployed by 09:00 and VDI's were issued to keep the units on line past the hours for which they were originally procured.

At 09:30, three QSEs notified ERCOT that their gas supplier had notified them that they were to curtail their use of gas to the level required for "Human Need," and would require a signed affidavit to that effect. The ERCOT COO determined that gas needed for generation met that qualification.

At 11:30, a QSE reported that their gas supplier had cut their supply of gas to an entire station. Units tripping resulted in a loss of [REDACTED] of generation. With frequency at 59.81 Hz, ERCOT had deployed all available NSRS and was out of Balancing Energy and Regulation Reserve Up, but monitored values still showed 3,500 MW's of Responsive Reserve available (of which 756 MW's were being deployed by the ERCOT EMS). The ERCOT total of QSE SCE was -1,500 MW's and increasing. At 12:01 via a Hotline Call, ERCOT declared EECF Step 1 and requested all QSEs to bring on all available generation and bid the available output into the balancing market. ERCOT verified that the DC Ties were fully loaded with energy coming into ERCOT and all RMR units were ordered to maximum capacity.

After the EECF implementation, frequency and SCE were restored and the situation greatly improved within 30 minutes. ERCOT terminated EECF Step 1 at 19:30.

The Day-Ahead Market for the 26<sup>th</sup> indicated a capacity shortage for Responsive Reserve Service (RRS). The ERCOT Operator decided that the shortage was not enough to warrant opening a 2<sup>nd</sup> market, given the known available capacity limitations, which had been expressed by the QSEs.

### **Transmission Outages Requested back In-Service**

ERCOT requested that the continuous transmission outages that would not be worked on that day be put back in-service. Oncor had the following continuous outages open, after discussion between ERCOT and Oncor on the 24<sup>th</sup>; the lines were put back in service for 1 day on the 25<sup>th</sup>.

Eules – DFW B East 138 kV Line  
Eules – DFW SW Airport 138 kV Line  
Royse – Rockwall Alum Tap 138 kV Line  
Royse – Rockwall 138 kV Line  
Handley – Everman #2 138 kV Line  
Forney – South Rockwall 138 kV Line

ERCOT withdrew approval for the following outages.

Anna – NW Carrollton 345 kV Line, on 2/24 at 10:31

Big Lake – San Angelo Power Station 138 kV Line, on 2/25 at 08:37

### **Summary of Verbal Dispatch Instructions (VDIs)**

Frequency Desk VDIs

F-022503-01	08:33 Hold NSRS on until further notice
F-022503-02	08:38 Hold NSRS on until further notice
F-022503-03	08:40 Hold NSRS on until further notice

F-022503-04 10:59 Additional increase on NSRS, from F-022503-01  
F-022503-05 11:48 Additional increase on NSRS, from F-022503-04  
F-022503-06 23:04 Lower generation output due to high frequency  
F-022503-07 23:10 Lower generation output due to high frequency

Transmission Desk VDIs

T-022503-07 01:19 OOME plant (2 units) to minimum levels for oil burns  
T-022503-08 06:12 OOMC/E unit on-line for transmission constraint  
T-022503-09 11:29 OOME unit (T-022503-08) to another level for constraint  
T-022503-10 14:19 OOME unit

**Summary of Notices, Alerts, etc. (from Logs and MIS) and Times of their Postings**

02/25/2003 02:45 Market Advisory – Gas Curtailments  
02:45 Weather Advisory – Inclement Weather  
03:32 Market Advisory – Insufficient Balancing Bids  
07:10 Transmission Alert – Morgan to East  
13:01 EECF #1 Implemented at 12:01  
19:47 ERCOT EECF #1 Terminated at 19:30  
21:54 Transmission Alert  
21:56 Extend Cold Weather Alert  
22:29 Cold Weather Alert

**Limits Exceeded during EECF Period**

Morgan – East ( ) 18:32 to 19:18 (46 min) Flow – ( )

## Load and Forecast Analysis

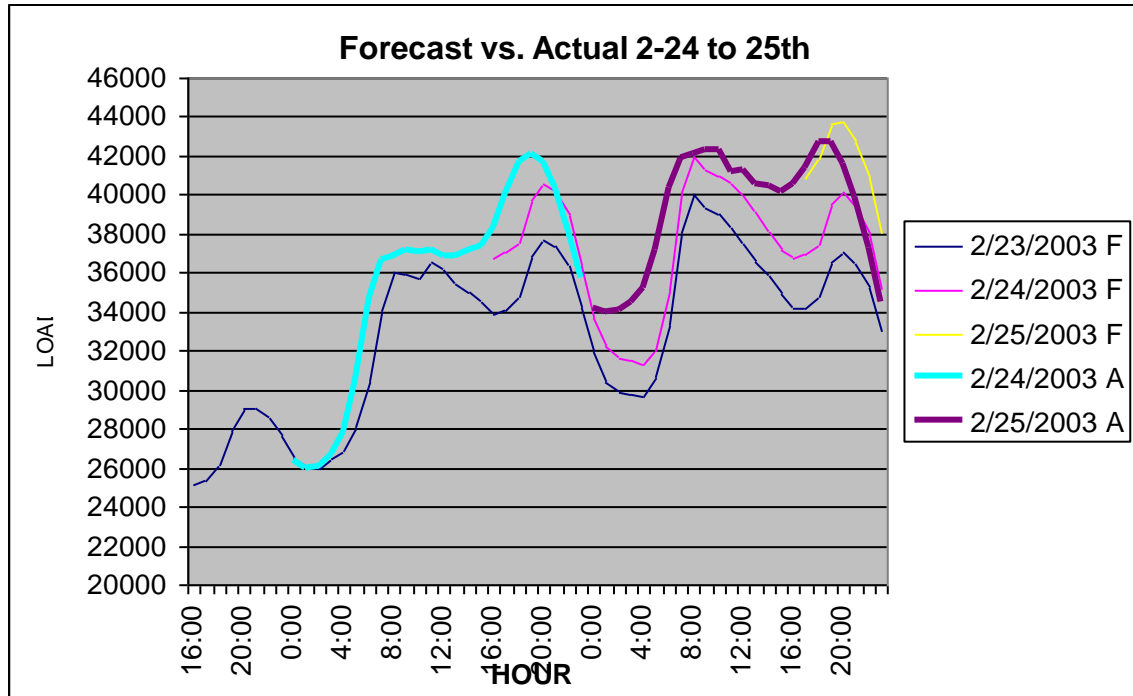


Figure 1

Figure 1 is a graph of load forecasts run for the daily Replacement market, from February 23<sup>rd</sup> through the 25<sup>th</sup>; compared to actual loads for the 24<sup>th</sup> and 25<sup>th</sup> of February.

**Low Temperature Forecast (DFW and Austin)**

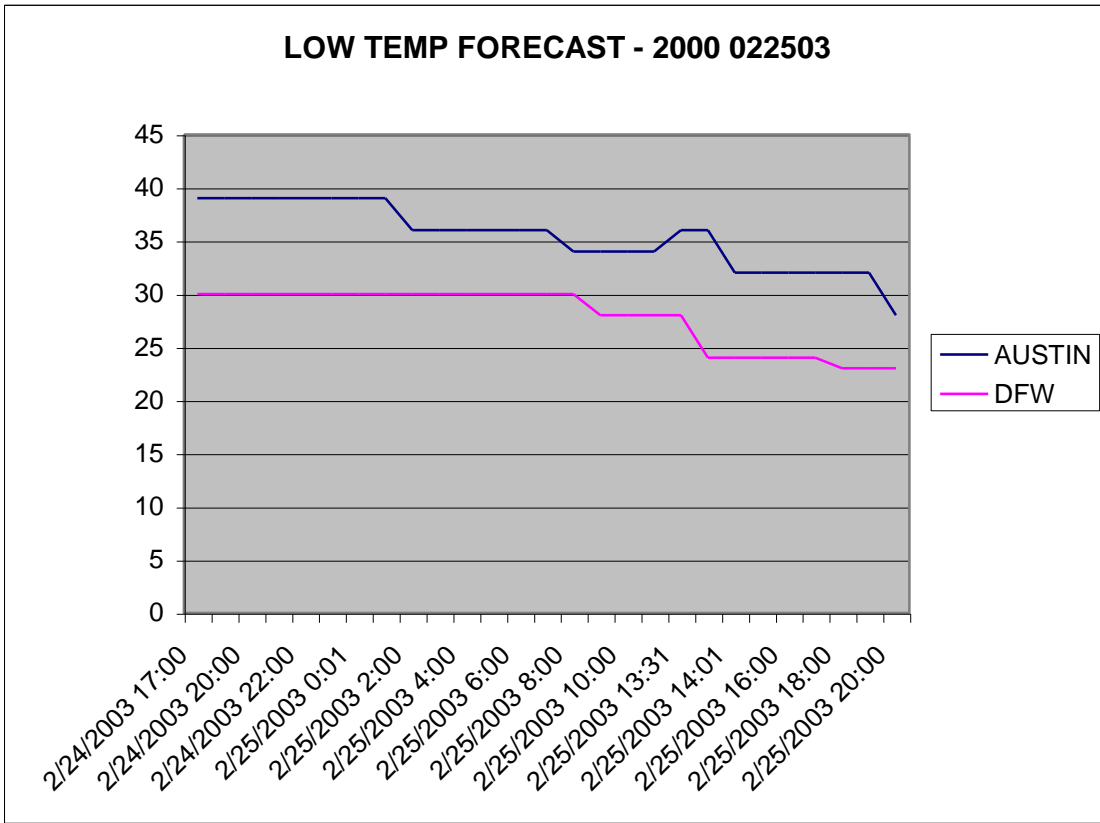


Figure 2

The ERCOT Forecaster corrects itself as the day progresses. The actual low temperatures in Austin and DFW were 28 and 23 respectively. The forecasted low each hour for Austin was incorrect until the 20:00 forecast and the 18:00 forecast for DFW 25<sup>th</sup>.

**Load and Generation Vs Capacity**

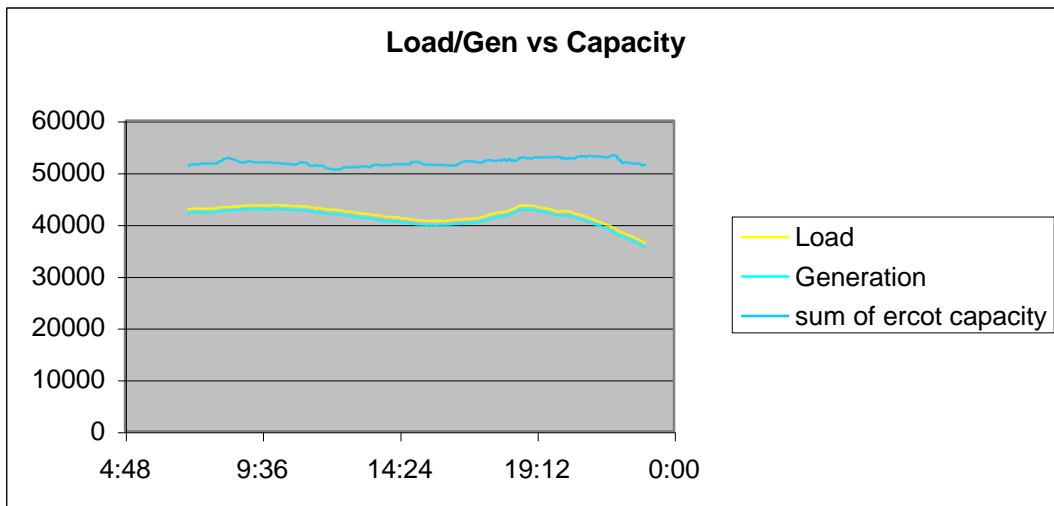


Figure 3

Figure 3 indicates ERCOT Capacity exceeded ERCOT Load and Generation, however as seen in Figure 4, frequency continues to decrease and was below 60 Hz from 10:55 to 12:11.

**ERCOT Frequency**

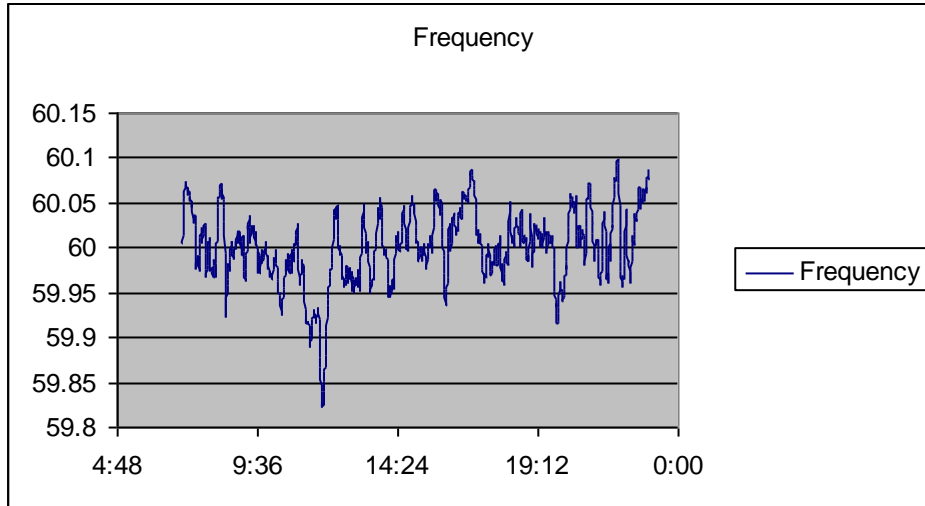


Figure 4

ERCOT Frequency for February 25<sup>th</sup> for the period from 07:00 till 23:00.

**Balancing Energy, Regulation and Sum of SCE**

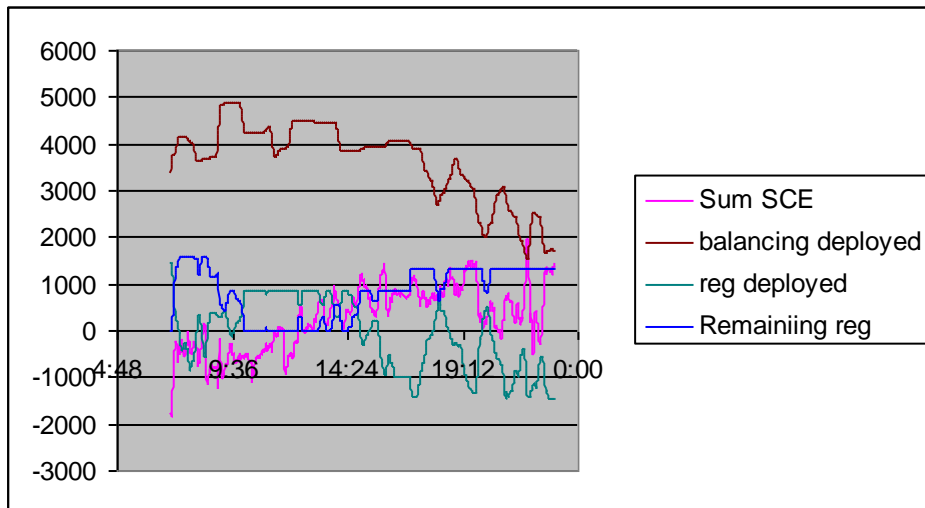


Figure 5

The total of QSE SCE is negative from 08:30 until 11:30 and again from 11:40 until 12:20. The flattened parts of the Remaining Regulation curve indicate that all available Regulation has been deployed. The flattened parts of the Balancing Energy Service Deployed curve also indicate that all Balancing Energy Service has been deployed.

## BES Deployment by Zone and Total

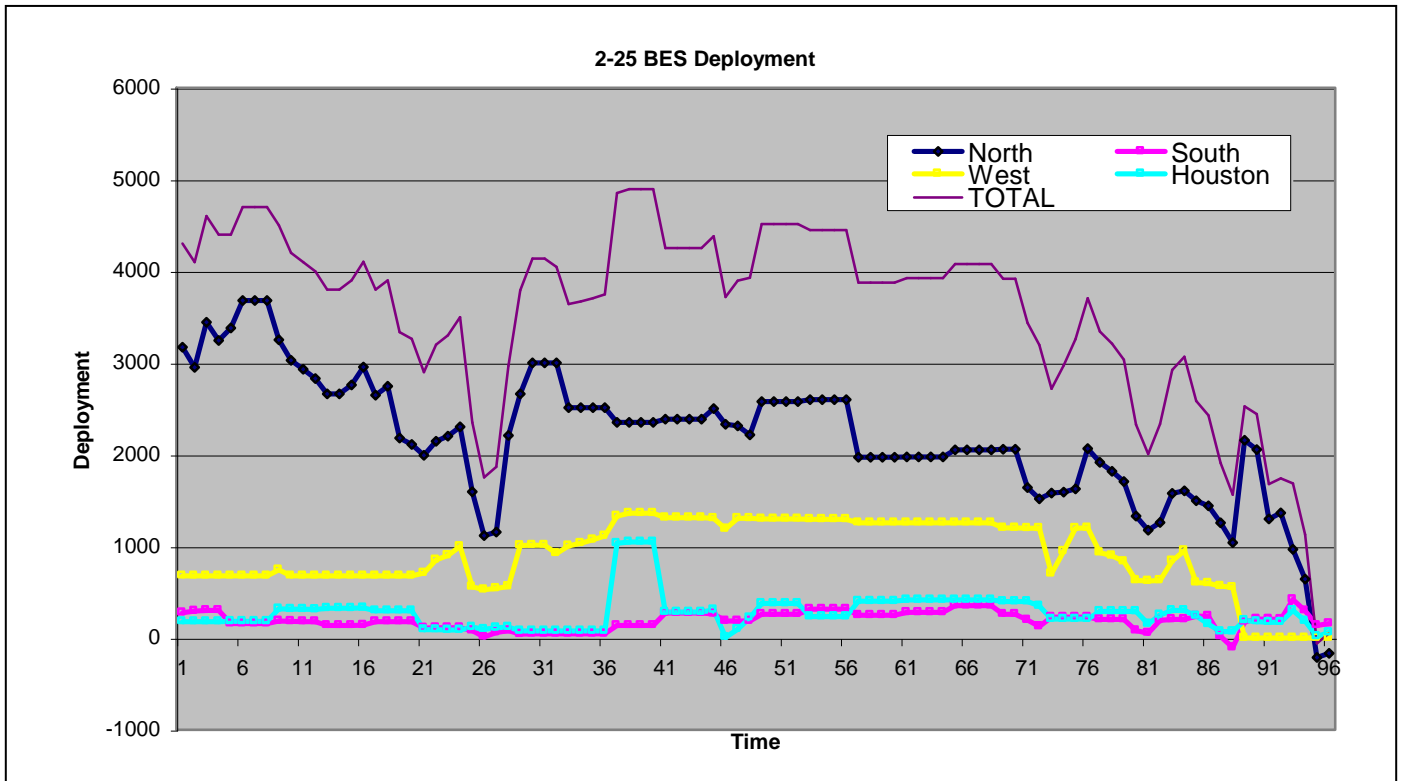


Figure 6. Shows BES Deployment by zone and the system wide total by interval



### UBES Bid Availability and Deployment (MW)

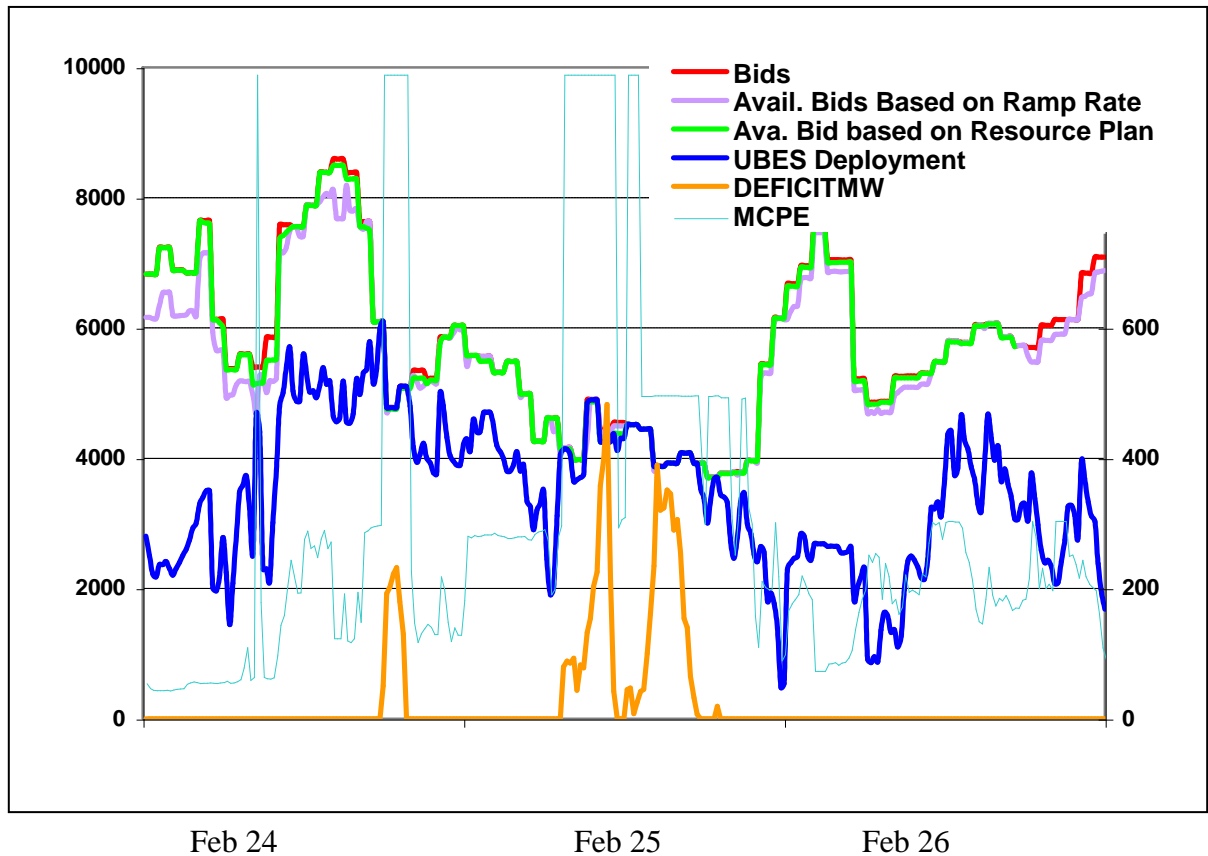


Figure 7. For several hours on the 24<sup>th</sup> and 25<sup>th</sup>, all the available BES bids were deployed, this caused the MCPE to rise to almost \$1,000.00 per MWh. At the same time there were insufficient BES Bids to meet the load requirements as shown by the high amounts of deficit MW.

### Gas Curtailments

Preliminary estimates done by ERCOT indicated that, on an ERCOT total basis, approximately 5,500 MW of generating capacity was reduced due to gas curtailments and approximately 3,200 MW was picked-up on back-up fuel, an estimated net loss of 2,300 MW.

**Resource plan analysis for hour ending 13:00 2/25/2004**

As shown in the table below, most QSE's with negative SCE's cannot be explained as due to unit outages. This data supports the conclusion that the shortage was not due to a capacity shortage, but was due to an energy or fuel shortage.

Name	Capacity	MW	Outages Reported in Scheduler	Calculated Reserve	SCE
TXU PORTFOLIO MANAGEMENT COMPANY LP (QSE)	██████████	██████████	4299.2	8161.8	1462.8
RELIANT ENERGY ELECTRIC SOLUTIONS (QSE)	██████████	██████████	0	74	68.4
TEXAS GENCO LP (QSE)	██████████	██████████	7190.8	2963.2	20.4
ANP FUNDING I LLC	██████████	██████████	825	-100	-524.1
AUTOMATED POWER EXCHANGE	██████████	██████████	800	405	16.8
CITY OF AUSTIN DBA AUSTIN ENERGY (QSE)	██████████	██████████	643	894	-396.9
CITY OF GARLAND (QSE)	██████████	██████████	72.5	463.5	-0.28
CORAL POWER LLC	██████████	██████████	0	10	-0.95
FPLE_WIND_FPL ENERGY POWER MARKETING INC. (SQ2)	██████████	██████████	0	246	-230.7
LOWER COLORADO RIVER AUTHORITY (QSE)	██████████	██████████	679	48	-156.8
MIRANT AMERICAS ENERGY MARKETING LP	██████████	██████████	304	555	-429.8
TENASKA POWER SERVICES CO	██████████	██████████	103	47	2.63
AMERICAN ELECTRIC POWER SERVICE CORP	██████████	██████████	2330	-663	16.8
BTU QSE SERVICES INC	██████████	██████████	0	156	-36.6
CALPINE POWER MANAGEMENT LP	██████████	██████████	305	1517	-3.6
CONSTELLATION POWER SOURCE INC	██████████	██████████	0	0	1.4
DYNEGY POWER MARKETING INC	██████████	██████████	276.2	139.8	2.7
SOUTH TEXAS ELECTRIC CO OP INC (QSE)	██████████	██████████	0	71	5.2
EXELON POWER TEAM	██████████	██████████	1218.5	1015.5	217.6
FPLE PMI BASTROP FPL ENERGY POWER MARKETING, INC. (SQ1)	██████████	██████████	0	50	17.27
Totals	70751	35651	19046.2	16053.8	

**ERCOT EECF Questionnaire**

Attachments 2 and 3 are copies of the questionnaires sent to Transmission Operators (TO) and QSEs with resources, regarding the events of February 25<sup>th</sup>. Summarizing the responses to the questionnaires (Not all TOs and QSEs responded):

Transmission Operators (TOs) reported that they were not informed of the EECF via the ERCOT Hotline. TOs reported several instances of Galloping Conductors that resulted in 345 and 138 kV line trips and customer outages. One TO reported that none of the Galloping Conductor phenomena occurred during the EECF event.

QSEs responded that 64,806 MW of capacity with 20,739 MW (including mothballed units and wind) unavailable at the time of the EECF. They also reported limitations of

1,438 MW due to lack of fuel and reduced capability on oil. Not all QSE respondents addressed limitations to power plant facilities due to fuel limitations, however those that did, reported limited spot market gas available and gas pipeline limitations due to low delivery pressures and frozen well heads. Several units were taken off line or backdown to maintain pipeline pressures and some units were unable to run due to fuel curtailments. ERCOT Operational issues raised by QSEs:

- The gas curtailments need to be investigated and perhaps ERCOT needs to do biannual surveys to see if alternative or back-up fuels are available.
- Weather forecasts across ERCOT predicted temperatures that were higher than the actual temperatures for February 25<sup>th</sup>.
- ERCOT needs to review the quality of their weather forecast service.
- There was a severe fuel shortage
- ERCOT waited too long to order RMR units thus hindering efforts for the QSE to obtain adequate gas supplies.
- Clarify ERCOT's role in determining "Human Needs" events due to gas curtailments.

### **Appendices**

The ERCOT Operations Logs are attached as Appendix 1. The graphs provided by ERCOT Operations to the Frequency Control Task Force for their report is Appendix 2.

### **Observations**

- Several QSEs did not satisfy their SCEs, yet 3,500 MW's of Responsive RRS showed to be available (Attachment 1 shows hourly average SCEs for QSEs for February 25<sup>th</sup>). All QSEs were called to discuss Net Dependable Capabilities shown in the Resource Plans. Some comments were made that if the QSEs did review their resource plans; they would have to de-rate their units.
- If units are curtailed on gas or limited due to fuel oil, it is imperative that QSEs update their Resource Plans; otherwise ERCOT monitors "Paper-Reserves."
- It appears the market was depending on purchasing capacity in ERCOT rather than arrange for alternate fuel sources.
- Weather forecasts were in error; load forecasts were in error, available capacity was made worse by fuel curtailments.
- In the Day-Ahead Market there were adequate BES Bids, but as the day went on, BES Bids were withdrawn. This caused capacity shortages even though actual loads were typically below the load forecast for February 25<sup>th</sup>.
- Without accurate capacities/capabilities, it is likely some Ancillary Services, although scheduled or procured, were not provided.
- The inability to update schedules and plans during the Operating Period (2 hours) is restrictive. During certain times, it may be beneficial to suspend the Operating Period and allow for real-time updates. This is a pending system change project.
- When EECF was declared at 12:01, ERCOT made a Hotline call to the QSEs, but forgot to call the T/O's. Hotline call made to T/O's about 14:00

- PGC's with backup fuel storages may have made the difference between shedding and not shedding firm load.
- There is a critical dependency on natural gas as a fuel for ERCOT Generators.

### **Recommendations**

- Market mechanisms to address fuel limitations should be explored.
- Clarify the need for accurate Resource Capabilities
- Emphasize that the market needs to bid their capabilities into the A/S Markets; this is a basic assumption of the market design.
- ERCOT Operations, including TO's and QSE's need to review their weather service providers.

### **Conclusion**

This EECF Event was primarily a result of seriously inaccurate weather forecasts for February 24<sup>th</sup> and 25<sup>th</sup> (even during the event) that made it difficult to foresee natural gas limitations and load requirements. There was a shortage of capacity due to an inadequate natural gas supply as a result of curtailments.

# Attachment 1

## HOURLY SCE (CALCULATED) AVERAGE BY QSE FOR 02/25/2003

Time indicates starting interval

AVERAGE  
HOURLY

	AEN	AEP	ANP	APX	BTU	CAL	CONA	COR	DYN	FPLB	FPLW	FPL	GPL	LCRA	MIR	EXE	PG&E	TEXGENCO	RES	STEC	TEN	TXU	ERCOT SCE
0:00	-555.76	-268.89	-115.73	26.48	0.88	-0.20	0.45	-10.81	7.01	19.33	0.00	-28.01	0.87	-2.76	-215.93	-50.67	0.00	7.62	-2.57	13.99	5.80	-19.94	-1189
1:00	-304.05	-268.99	-107.74	28.73	8.85	1.41	0.42	-8.47	7.28	3.96	0.00	-21.67	1.53	6.17	0.44	3.81	0.00	8.34	3.25	6.23	18.53	-0.60	-613
2:00	-149.72	-207.85	15.17	27.86	5.07	-3.68	0.44	-11.39	4.92	8.98	0.00	-17.19	1.47	4.37	-8.51	3.90	0.00	-20.13	3.38	2.17	29.02	2.63	-1801
3:00	-128.05	-188.65	10.17	28.14	6.02	1.44	0.31	-6.55	4.75	12.30	0.00	-11.35	1.98	7.91	-1.75	4.08	0.00	8.58	2.95	2.94	12.72	-14.92	-247
4:00	-206.07	-210.45	-45.46	-205.95	-8.48	-1.35	0.37	-16.20	42.41	19.54	-5.22	-11.87	-1.17	-5.91	17.49	10.44	0.00	-52.07	3.35	1.12	22.16	33.23	-620
5:00	-191.69	-142.36	-209.34	-348.56	2.45	90.45	0.35	-1.67	24.57	53.70	-70.20	-10.99	-0.02	7.58	-9.04	-5.77	0.00	-57.64	-0.12	13.37	7.18	-154.40	-867
6:00	-293.20	-53.31	-892.08	-820.53	-19.11	-121.28	0.96	-27.95	10.61	-210.80	-259.34	-10.04	-4.36	-61.58	-139.95	70.30	0.00	-553.60	-3.09	-6.00	18.15	360.19	-3016
7:00	-284.97	30.20	-637.86	-557.24	-7.08	-2.77	0.25	-6.04	-4.50	-221.93	-241.39	-10.98	4.09	-25.89	-123.91	-45.97	0.00	-134.64	1.98	8.41	72.96	16.85	-2170
8:00	-426.54	5.28	-487.70	-384.74	-8.31	-11.28	0.11	0.36	7.08	-161.87	-44.21	-14.00	-0.65	-30.54	-173.59	-31.12	0.00	-117.37	2.50	1.45	33.89	170.00	-5186
9:00	-369.33	97.61	-471.62	7.09	0.02	-4.39	-0.02	-1.29	-27.60	4.16	15.49	-16.00	1.66	-29.19	-303.52	16.87	0.00	-525.69	6.35	8.74	52.66	530.90	-1007
10:00	-409.76	15.47	-524.69	111.31	-8.97	-16.08	0.04	-6.57	2.06	-22.33	-11.10	-16.01	-0.36	-134.49	-365.17	173.27	0.00	-184.42	6.62	-1.93	68.10	521.71	-803
11:00	-443.76	-8.00	-673.35	-36.44	-7.33	0.68	1.38	-19.84	-1.21	-7.09	15.10	-15.05	-1.44	-144.59	-218.90	121.23	0.00	-282.81	8.50	-7.44	22.89	822.13	-1810
12:00	-444.20	15.23	-685.80	10.21	-12.46	1.77	1.15	-5.64	4.94	-7.74	-49.19	-13.01	0.27	-146.18	-417.21	103.47	0.00	-491.70	41.83	3.57	45.42	1,462.41	-583
13:00	-396.90	16.78	-524.10	39.76	-36.60	-3.66	1.43	-0.95	2.72	17.27	-230.17	-13.00	-0.28	-156.88	-429.88	217.61	0.00	20.40	68.44	5.21	2.63	1,462.85	63
14:00	-366.17	4.37	-517.30	86.41	-38.03	-6.07	1.42	0.78	-1.40	-7.09	13.41	-14.99	-3.38	-91.53	-368.67	154.83	0.00	16.64	32.21	3.25	1.33	1,379.29	-520
15:00	-285.84	1.27	-476.80	-1.71	-2.43	12.74	1.29	3.26	4.13	-4.30	14.49	-17.91	-6.79	-11.15	-364.43	25.49	0.00	15.54	31.42	1.82	-8.68	1,473.52	405
16:00	-173.90	3.15	-335.68	-36.33	8.78	1.64	0.69	7.37	1.29	-6.57	13.53	-24.67	1.31	66.98	-419.63	4.45	0.00	14.83	-4.14	1.91	-7.78	1,218.62	336
17:00	-187.51	-4.32	-294.10	-29.04	-2.09	-5.76	0.77	-0.27	3.01	0.54	-85.19	-49.52	0.16	81.32	-355.46	22.86	0.00	16.32	-4.11	-1.06	5.95	1,266.26	741
18:00	-279.29	-3.40	-294.08	-255.62	-10.23	-6.87	1.46	2.46	0.48	-0.61	-86.91	-71.17	-0.28	115.94	-130.23	14.47	0.00	-10.92	-6.96	2.90	10.13	1,242.68	234
19:00	-148.40	-0.75	-239.28	-167.86	7.64	4.57	1.49	-0.96	4.26	1.35	-87.81	-83.95	0.21	51.09	-61.37	23.09	0.00	71.19	-8.50	3.60	17.70	1,162.37	550
20:00	-164.15	17.67	-243.87	-215.86	8.83	18.12	0.16	4.63	-4.84	0.38	-88.60	-42.55	0.93	3.87	37.84	36.00	0.00	18.24	-10.19	4.89	10.12	299.14	784
21:00	76.77	5.09	-294.62	-238.42	18.15	-3.23	0.25	-0.08	9.19	-16.76	-92.07	-55.14	5.82	102.43	35.90	70.77	0.00	77.14	-10.67	8.66	8.14	342.96	50
22:00	82.34	-80.52	35.12	69.15	8.89	4.57	0.03	6.54	-9.68	38.64	-14.51	-75.31	6.97	65.30	58.28	3.80	0.00	-55.37	-4.82	6.70	21.03	469.79	637
<b>TOTAL</b>	<b>-6050</b>	<b>-1225</b>	<b>-8011</b>	<b>-2863</b>	<b>-86</b>	<b>-49</b>	<b>15</b>	<b>-99</b>	<b>92</b>	<b>-487</b>	<b>-1294</b>	<b>-644</b>	<b>9</b>	<b>-328</b>	<b>-3957</b>	<b>947</b>	<b>0</b>	<b>-2212</b>	<b>158</b>	<b>85</b>	<b>470</b>	<b>14048</b>	





### Attachment 3 EECF Questionnaire – Qualified Scheduling Entities

2705 West Lake Drive  
 Taylor Texas 76574  
 March 7, 2003

Subject: EECF event of 2/25/2003

To assist ERCOT in its review of Emergency Electric Curtailment Plan (EECP) operations on February 25, 2003, ERCOT requests the following information by Monday March 31, 2003.

- 1) How much generation capacity, in MW, did your QSE represent on February 25, 2003? (What was your maximum generation capacity? If the amount of capacity varied over the day, provide the MW capacity represented at 0700,12:00, and 1900)

07:00 \_\_\_\_\_  
 12:00 \_\_\_\_\_  
 19:00 \_\_\_\_\_

- 2) How much of this capacity, in MW, was unavailable for maintenance on February 25, 2003. (If the amount of capacity on maintenance varied over the day, provide the MW capacity on maintenance at 0700,12:00, and 1900)

07:00 \_\_\_\_\_  
 12:00 \_\_\_\_\_  
 19:00 \_\_\_\_\_

- 3) How much capacity, in MW, was limited due to lack of fuel on February 25, 2003. (If the amount of limitation varied over the day, provide the MW capacity limited at 0700,12:00, and 1900)

07:00 \_\_\_\_\_  
 12:00 \_\_\_\_\_  
 19:00 \_\_\_\_\_

- 4) How much capacity was available to generate at 0700, 1200, and 1900 (We expect this to be the response to item 1 minus 2 minus 3. If not, please explain)

07:00 \_\_\_\_\_  
 12:00 \_\_\_\_\_  
 19:00 \_\_\_\_\_

- 5) If your facilities were fuel limited, please explain the circumstances leading to this fuel limitation. (i.e. provider’s obligation to serve, backup fuel availability, your company philosophy toward fuel supply)

- 6) How much of your capacity, in MW, was committed to Base Power Schedules, Regulation Service, Responsive Reserve Service, ERCOT verbal dispatch instructions, Non-Spinning Reserve Service, and Balancing Energy Service Bids at 0700,1200, and 1900 on February 25,2003. (Note: Committed means the amount bid or scheduled into the market so that it was unavailable for bids into the balancing energy market)

Time	Base Power Schedules	Regulation Service Obligations	Responsive Reserve Service Obligation	ERCOT Instructions	Non-Spinning Reserve Service Obligation	Balancing Energy Service Bids
07:00						
12:00						
19:00						

- 7) How much balancing energy did you bid into the balancing market for hour ending 0800, 1300, and 2000 on February 25, 2003.

07:00 \_\_\_\_\_  
 12:00 \_\_\_\_\_  
 19:00 \_\_\_\_\_



8) What do your records show your SCE was at 0700, 1200, and 1900 on February 25,2003. (If information not retained, mark NA)

07:00 \_\_\_\_\_

12:00 \_\_\_\_\_

19:00 \_\_\_\_\_

9) Please describe briefly the events your operations department experienced on February 25<sup>th</sup>.

10) Please list any issues, or experiences observed; that you believe ERCOT should review regarding this event.

Thank you very much for your assistance.

Respectfully,

\_\_\_\_\_

Operations Engineer

ERCOT

## Appendix 1. ERCOT Operations – Operator Logs

ID	LOG DATE	START	END	LOG BOOK	LOG TYPE	COMMENTS
68436	2/25/2003	0:12	0:00	Frequency Control	SCE	AEP SCE @ -260, they report B. Davis and Fort Phantom units are slow coming on line and to pick up load. Expect 1 hour to correct SCE
68435	2/25/2003	0:15	0:00	Frequency Control	Unit Trip	TXU Graham 2 tripped [REDACTED] due to blown tube, return estimate of 2 days
68428	2/25/2003	0:15	23:59	Transmission Security	VDI	Issued VDI # T-022503-01 to TXU to limit Woodward #1 to less than or equal to [REDACTED] and Woodward #2 to less than or equal to [REDACTED] for intervals 0015 - 2400.
68429	2/25/2003	0:15	23:59	Transmission Security	VDI	Issued VDI # T-022503-02 to AEP to limit SW Mesa to less than or equal to [REDACTED] for intervals 0015 - 2400.
68430	2/25/2003	0:15	23:59	Transmission Security	VDI	Issued VDI # T-022503-03 to AEN to limit King SW to less than or equal to [REDACTED] for intervals 0015 - 2400
68431	2/25/2003	0:15	23:59	Transmission Security	VDI	Issued VDI # T-022503-04 to FPL to limit King NE and King NW to less than or equal to [REDACTED] each and King SE to less than or equal to [REDACTED] for intervals 0015 - 2400.
68432	2/25/2003	0:15	23:59	Transmission Security	VDI	Issued VDI # T-022503-05 to LCRA to limit Indian Mesa NWP to less than or equal to [REDACTED] for intervals 0015 - 2400.
68433	2/25/2003	0:15	23:58	Transmission Security	VDI	Issued VDI # T-022503-06 to Texas Genco to limit Indian Mesa Enron #1 to less than or equal to [REDACTED] and Indian Mesa Enron #2 to less than or equal to [REDACTED] for intervals 0015 - 2400.
68443	2/25/2003	1:08	0:00	Transmission Security	Line Outage	LCRA report 345kv line Marion-GPP Plant due to ice. Update to follow.
68458	2/25/2003	1:08	0:00	Transmission Security	Line Outage	LCRA report 345kv line Clear Springs-Rio Nogales tripped due to weather.
68452	2/25/2003	1:45	0:00	Transmission Security	Security Analysis	Ran Power Flow study - Valid Solution. Completed Security Analysis. With the current LCRA forced outages if the Marion 24AT2XF 345/138 KV trips, the Zorn to McCarty Lane T205 overloads by 128%. LCRA (Mosel) reported that T205 was good for [REDACTED] at current temperature. Regular limit was [REDACTED].
68457	2/25/2003	2:20	0:00	Day Ahead	All Other Notes	DBES 12% FOR ALL ZONES AND NOTIFIED @ 0213
68450	2/25/2003	2:45	0:00	Supervisor	Advisory	Issued an Advisory due to weather and gas curtailments across ERCOT.
68451	2/25/2003	3:00	0:00	Supervisor	System Security	We show ERCOT peaking at 0800 with 44,192. We have 40,000 in Resource Plans and 5,260 in up balancing bids. It looks like we may make it across morning peak.
68464	2/25/2003	3:15	6:00	Transmission Security	OOME	OOME LHSES-1 to [REDACTED] and LHSES-2 to [REDACTED] due to oil minimums. 03:15-06:00.
68463	2/25/2003	3:19	0:00	Supervisor	System Security	QSE's pulled over 1,000 MW of up balancing bids for HE 0800. I issued a Market Advisory for insufficiency of up balancing bids.
68465	2/25/2003	3:49	0:00	Frequency Control	ADVISORY	Talked to all QSE's about morning load pickup. Issue are, TXU, STEC, LCRA AEN, BYU, GPL are burning oil to cover gas curtailments. LCRA expects to be short [REDACTED] on covering load. Mirant expects to be short [REDACTED] short 0700-0800, and [REDACTED] for 000-0900. Calpine reports TxCity CTs coming off with tube leak ([REDACTED]) TexGenCo reports CBY2 is coming on with [REDACTED] and they feel confident. Calpine reports they think they will be able to bid in [REDACTED] into the market for 0600 and 0700. STEC will be running peak shaving diesel units total of [REDACTED]. Excelon has handley 3 coming on line ([REDACTED]) AEN is still waiting for Holly 3 to make it on line.
68470	2/25/2003	4:00	0:00	Day Ahead	All Other Notes	RUNNING WEATHER MACRO
68474	2/25/2003	4:09	0:00	Operating Period	Deployments	Less than 5% balancing energy available in the Houston and South zones. Deployed 177 mw NSRS in the south zone and 466 mw in the Houston zone thru 0600. Verified awarded deployments with AEN, LCRA, Tenaska, STEC, Calpine, Dynegy, and Texas Genco.
68471	2/25/2003	4:15	0:00	Day Ahead	All Other Notes	REVIEWING LOAD AND WEATHER FORECASTS
68467	2/25/2003	4:19	0:00	Frequency Control	Unit Trip	APX Ennis CT1 tripped bringing the Steamer with it for [REDACTED] loss, due to sensor freezing. They are trying to get unit back on line.

68469	2/25/2003	4:28	0:00	Frequency Control	Balancing	Excelon reports Handley 3 is on line and they will have approx [REDACTED] to put into the BAL UP market.
68475	2/25/2003	4:34	0:00	Operating Period	Other	Ed Calpine called to report as soon as he got his NSRS deployment his computer loaded it into his system causing his SCE to go out the amount of his NSRS award. Ed will get his techs to look into this.
68473	2/25/2003	4:45	0:00	Frequency Control	SCE	Dynergy reports loss of load at a self-serve load site, and energy is being pushed out to the grid ([REDACTED]) they are trying to schedule this now.
68476	2/25/2003	5:03	0:00	Frequency Control	SCE	TexGenCo SCE @ -270, they report computer just did a reset and they cannot see where they are, I notified them of the of SCE, they will start picking up manually.
68477	2/25/2003	5:07	0:00	Frequency Control	SCE	APX shows SCE of -416, they report that Guad is having trouble coming up on top of the SCE that exists already, maybe another [REDACTED]
68479	2/25/2003	5:13	0:00	Frequency Control	SCE	TXU @ -226 TexGenCo @ -260 AEN @ -284 AEP @ -169 APX @ -410 ANP @ -201 no relief reported all are waiting on gen to come on or pick up due to freezing problems.
68478	2/25/2003	5:15	0:00	Day Ahead	All Other Notes	COPIED FORWARD AND PUBLISHED A/S OBLIGATIONS
68480	2/25/2003	5:27	0:00	Frequency Control	SCE	APX report Gaud lost power at 0110 and is behind schedule, Ennis should be up to schedule by 0700. SCE will shoe -300 or so for a couple more hours.
68481	2/25/2003	5:30	0:00	Frequency Control	SCE	ANP reports SCE of -207 should be covered by 0630
68507	2/25/2003	5:50	0:00	Transmission Security	Transmission Limit Violations	aep/tdsp reports n_mccallen cb_105 is at 100% of its [REDACTED] rating.
68484	2/25/2003	6:04	0:00	Operating Period	Deployments	@05:37 extended NSRS deployments in the Houston and South zones through 08:00. 400 and 230 mw's deployed respectively.
68739	2/25/2003	6:05	0:00	Supervisor	Generation Derated	Texas Genco reports they are being curtailed on gas and want be able to pick up his SCE for a while. He's out about [REDACTED] at this time.
68490	2/25/2003	6:05	0:00	Frequency Control	SCE	TEX GEN CO REPORTED THEY WILL BE WAY BEHIND THEY ARE RUNNING OUT OF GAS
68494	2/25/2003	6:05	0:00	Transmission Security	Transmission Limit Violations	RIO_LAPLAMA IS > 100%.
68492	2/25/2003	6:07	0:00	Frequency Control	SCE	ANP IS FIGHTING ICING AT MIDILOTHIAN AND GUADALUPE AND WILL BE SLOW BRING THEM UP.
68489	2/25/2003	6:10	0:00	Day Ahead	All Other Notes	DAY A-HEAD BUILT RESOURCE STUDY RPV-022603-JD ID#161526 FOR FEB. 26, 2003.
68495	2/25/2003	6:12	0:00	Transmission Security	VDI	VDI TO APX TO BRING ON FRONTERA2 ASAP. THIS IS VDI'D IE 0615 THRU 1200.
68503	2/25/2003	6:12	0:00	Transmission Security	VDI	vdi to Andrew w/apx to bring on frontera2 ASAP due to n_mccallen cb105 at [REDACTED].
68488	2/25/2003	6:15	0:00	Transmission Security	OOMC	OOMC'D LAPALMA_7 FOR HE 7:00 THROUGH HE 10:00. RIO_LAPLAMA IS @ 103%.
68493	2/25/2003	6:21	0:00	Transmission Security	Limit Violations	DUKE_SE EDIN IS @ 100%.
68491	2/25/2003	6:23	0:00	Day Ahead	All Other Notes	DAY A-HEAD RAN WEATHER MACRO, EVERYTHING LOOK'S O.K.
68512	2/25/2003	6:23	0:00	Transmission Security	OOMC OF RMR GENERATION	oomc of lapalma6 (rmr generation) due to the nedin_riohondo loading at [REDACTED].
68496	2/25/2003	6:37	0:00	Transmission Security	OOMC	OOMC'D SILAS_9 FOR RIO_LAPALMA, WHICH IS @ 120%. LA PALMA_7 IS CURRENTLY GENERATING [REDACTED].

68522	2/25/2003	6:40	0:00	Transmission Security	Transmission Limit Violations	aep reports abmb 6010 is at 100% of it's rating.
68504	2/25/2003	6:42	0:00	Operating Period	Balancing	Hour Ahead study for 0800 shows zero BES available for 0730 - 0800 intervals. Real Time indicates South and Houston zones 100% deployed.
68516	2/25/2003	6:42	0:00	Transmission Security	Contingency Limit Violation	over on the mgses east contingency limit [REDACTED].
68500	2/25/2003	6:49	0:00	Operating Period	Other	@ 06:30 100% [REDACTED] URS deployed. @ 06:45 approximate SCE remains @ -2533 mw's.
68738	2/25/2003	7:00	0:00	Supervisor	Alert	Alert issued, Morgan to East over first contingency limit after starting our non-spin in the west.
68501	2/25/2003	7:10	0:00	Transmission Security	Weather Alerts	issued transmission alert (25022003071044) due to operations outside of 1st contingency criteria.
68505	2/25/2003	7:15	0:00	Operating Period	Deployments	@ 07:13 deployed 100% NSRS in all zones per supervisor through 09:00.
68514	2/25/2003	7:18	0:00	Operating Period	Balancing	Market Notification posted for questionable MCPE's at 0730 through 0815. 0900 Hour Ahead study indicating 44% BES available at 0815 with 19, 15 and 12% available for the remaining intervals.
68506	2/25/2003	7:20	0:00	Day Ahead	All Other Notes	DAY A-HEAD SENT OUT RMR SCHEDULE'S FOR FEB. 26, 2003
68736	2/25/2003	7:30	0:00	Supervisor	Advisory	Market Advisory issued asking for more up balancing bids. 100% of balancing energy being used in all zones.
68511	2/25/2003	7:37	0:00	Frequency Control	ADVISORY	ISSUED A MARKET ADVISORY DUE TO INSUFFICIENT UP BAL BIDS. HOT LINE CALL REMIND ALL TO KEEP ALL DATA UP DATED
68513	2/25/2003	7:43	0:00	Day Ahead	All Other Notes	DAY A-HEAD TALKED TO WALT WITH EXELON ABOUT THE NEED FOR HANDLEY'S FOR TOMORROW I TOLD HIM THAT IF POSSIBLE WE WOULD NEED 2 UNIT'S HE SAID THEY WOULD TRY TO GET THE GAS TO RUN THEM, I ALSO TOLD HIM THAT MCSES WOULD NOT BE NEEDED.
68537	2/25/2003	7:53	0:00	Operating Period	Other	Market Notification posted for questionable MCPE's at 0900 through 1015.
68519	2/25/2003	7:54	0:00	Transmission Security	Transmission Limit Violations	txu/tdsp reports kileen_copperas cove at 100% of [REDACTED] rating, lcrs was contacted about the remedial action plan of opening 6640 at copperas cove/lcrs.
68515	2/25/2003	7:55	0:00	Operating Period	Other	SCE's net remains negative at -1819 mw at 0755.
68517	2/25/2003	7:56	0:00	Frequency Control	Unit Trip	TENASKA DOW LAAR LDT2 TRIPPED WILL BE BACK ON IN APPROX. 10MIN.
68520	2/25/2003	7:59	0:00	Transmission Security	Transmission Limit Change	copperas cove 6640 opened by lcrs to relieve loading on the Killeen switch to copperas cove 138kv line.
68521	2/25/2003	8:00	0:00	Day Ahead	All Other Notes	DAY A-HEAD TALKED TO EXELON ABOUT GAS CURTAILMENTS FOR TOMORROW WED. AT THIS TIME TO BUY GAS FOR HANDLEY EXELON IS TELLING ME GAS COULD BE AS HIGH AS \$25.00 WITH THE HEAT RATE OF \$12.00 PRICE COULD BE AS HIGH AS \$300.00 OR HIGHER, AT THIS TIME THE NEED FOR HANDLEY IS ONLY FOR OUTAGES IN THE ONCOR AREA, I HAVE ASK THE OUTAGE COOR. TO CHECK ON THESE OUTAGES.
68524	2/25/2003	8:05	0:00	Transmission Security	withdrawn outage	instructed aep that ercot was withdrawing the big lake to saps 138kv clearance. and delaying the indenr to west Yates tap 69kv line clearance.
68525	2/25/2003	8:05	0:00	Transmission Security	VDI	the previously vdi'd generation at frontera2 is on line at this time.
68526	2/25/2003	8:30	0:00	Frequency Control	Verbal dispatch	F 02-25-03-01 REQUEST TXU TO HOLD [REDACTED] NSRS ON UNTIL FURTHER NOTICE DUE TO WEATHER AND LOAD.

68539	2/25/2003	8:32	0:00	Transmission Security	Cancelled Outage	txu reports the cancelled outage mlses cb_4740,
68528	2/25/2003	8:33	0:00	Frequency Control	Verbal dispatch	F 02-25-03-02 REQUEST TXGENCO TO HOLD ██████ NSRS ON UNTIL FURTHER NOTICE DUE TO WEATHER AND LOAD. DUE GAS CURTAILMENTS TXGENCO WILL STOP
68529	2/25/2003	8:34	0:00	Frequency Control	Verbal dispatch	F 02-25-03-03 REQUEST LCRA TO HOLD ██████ NSRS ON UNTIL FURTHER NOTICE DUE TO WEATHER AND LOAD.
68527	2/25/2003	8:44	0:00	Operating Period	Deployments	@08:44 sent message to recall all NSRS in all zones.
68530	2/25/2003	8:50	0:00	Frequency Control	Deployment	TEXGENCO WILL BE OFF ON SCE DUE TO TRYING TO PULL ██████ UP BAL BIDS OUT FOR 0900 HR AND IT DID NOT COME OUT. HE IS GETTING UP DEPLOYMENTS AND HE CANNOT COVER.
68531	2/25/2003	8:50	0:00	Transmission Security	RMR OOME	oome to aep on their rmr generation to full load on riop6,b_davis1, to make additional balancing energy available and lapalma6 to full load due to riohondo_lapalma at ██████.
68533	2/25/2003	9:00	0:00	Day Ahead	All Other Notes	DAY A-HEAD AT THIS TIME WE HAVE NOT RECEIVED ENOUGH INFO. FROM THE OUTAGE PERSON TO TELL EXELON THAT WE WILL NOT NEED HANDLEY FOR TOMORROW, EXELON CALLED AGIN AND SAID THEY WERE PAYING THE GAS FOR AT LEAST ONE UNIT I ASKED FOR THE LARGEST ONE, HANDLEY ██████, DUE TO THE OUTAGE'S AT THIS TIME WE NEED APPROX. ██████ IN THE FT. WORTH AREA HANDLEY ██████ AND EMSSES ██████ WOULD BE APPROX. ██████ I WILL NEED AT LEAST ONE MORE EMSSES.
68536	2/25/2003	9:10	0:00	Transmission Security	Contingency Limit Violation	under on the riohondo_lapalma limit of ██████.
68534	2/25/2003	9:18	0:00	Transmission Security	RMR OOME	oome to laredo1/3 to the top from i.e. 0930-1100 due to the bates auto loading at 98% of ██████.
68735	2/25/2003	9:30	0:00	Supervisor	Generation Derated	Paul Brietsman from Garland called saying he had received a call from Lone Star gas asking what percent of the generation he was producing is for "Human Needs" and that they were going to curtail any gas that was not being used for that reason. Received a call from ANP and AEP saying the same thing. I talked to ██████ about the situation and he said all were for human needs. I passed that along to ANP, AEP and Garland.
68538	2/25/2003	9:30	0:00	Transmission Security	withdrawn outage	withdrew the san ygnacio to riobravo outage as laredo generation is being brought up to help control the loading on the north mccallen cb105 (currently at ██████) and duke to se_edinburg at ██████ limit. this line taken out of service would preclude laredo generation from assisting in relieving the above lines.
68535	2/25/2003	9:34	0:00	Day Ahead	All Other Notes	DAY A-HEAD RAN WEATHER RUN MACRO, EVERYTHING LOOK'S O.K.
68540	2/25/2003	9:55	0:00	Operating Period	Balancing	Hour Ahead Study for hour ending 1100 hours indicates BES available beginning at 1015 of 4, 6, 4 and 4% respectively. Real Time still indicating Price Admin with MCPE of \$990.
68549	2/25/2003	10:08	0:00	Operating Period	Balancing	At 1045, we discovered we were trying to control to a load larger than combined gen and BES available. HA cut back load estimates closer to reality causing BES deployments to decrease. This caused the MCPE to drop the Price Admin indication at 1130 interval because we were not calling for more BES than was available. (It is not unusual for Operator Estimated Load to be several hundred mw to a thousand mw larger than STLF and Load ERCOT apparently due to errors in the system.
68541	2/25/2003	10:17	0:00	Frequency Control	Compliance	EXCELON REPORTED THEY ARE BIDDING IN ██████ UP AT AROUND 300\$. THE PROBLEM TURNED OUT TOBE ██████ GEN IN THAT ZONE AND THEY HAD ██████ SCHEDULED. SO THEY COMPUTER ONLY STRUCK THEM FOR ██████.THEY WE INFORMED ABOUT THIS TIME TO KEEP INFORMATION UPDATED.
68542	2/25/2003	10:17	0:00	Transmission Security	Cancelled Outage	txu/oncor reports the cancellation of the sdses 345kv bus.

68543	2/25/2003	10:40	0:00	Frequency Control	DC-E	OATI system is down.
68544	2/25/2003	10:59	0:00	Frequency Control	Verbal dispatch	F 02-25-03 TO INCREASE GEN OF [REDACTED] HE IS HOLDING UP, TO INCREASE TO [REDACTED].
68545	2/25/2003	11:13	0:00	Transmission Security	Forced Outage	cps reports forced outage on the braunig1580_brooks960 due to galloping conductors.
68547	2/25/2003	11:15	0:00	Transmission Security	Equipment	center point reports that their computers are down as of 1100, they have people working on this at this time.
68546	2/25/2003	11:17	0:00	Day Ahead	All Other Notes	DAY A-HEAD POSTED CAPACITY INSUFF. FOR FEB. 26, 2003. ON THE EMERGENCY NOTIFICATION PAGE.
68548	2/25/2003	11:29	0:00	Transmission Security	VDI	vdi (t-022503-9) to apx to maintain frontera2 current generation level at [REDACTED] level for i.e. 1215-2200.
68553	2/25/2003	11:30	0:00	Supervisor	generator forced out	Texas Genco reports all 4 Bertron units tripped at the same time with [REDACTED]. They said their gas supply was cut by their supplier.
68555	2/25/2003	11:50	0:00	Supervisor	Frequency	Frequency at 59.81hz RR shows to be 3500mw but SCE's hanging out 1500mw and nobody moving. Responsive being deployed shows to be 756mw but no one appears to be able to respond. SCE's just continue to increase. Out of upreg. Resource plans must not be updated to reflect gas curtailments, which have limited units.
68551	2/25/2003	11:59	0:00	Operating Period	Balancing	At approx 1130, Supervisor requested HA desk to control to a larger load than the gen and BES available because we were driving ERCOT frequency down (about 59.90). Complying with the request, we are controlling to a larger load than gen and BES available. The Price Admin indication has returned at interval 1215. MCPE had dropped to about \$295, now back to \$990.
68550	2/25/2003	12:01	0:00	Supervisor	EECP	EECP step#1 declared. All QSE's asked to bring all available gen. on line and bid into balancing market.
68552	2/25/2003	12:02	0:00	Frequency Control	EECP	ERCOT HAS DECLARED EECP STEP 1 HOT LINE CALL ALL QSE'S.NO PRINT OUTREQUESTED ALL AVAIL. RESORCES.& ALL RESORCES UPDATED. TEXGENCO LOST ALL BERTRON UNIT DUE TO GAS TRIP. EECP WAS ENDED AT 1930
68564	2/25/2003	12:02	0:00	Transmission Security	EECP	ercot implemented eeep step 1.
68556	2/25/2003	12:06	0:00	Transmission Security	Generation Outage	apx reports the loss of their gas supplies at their frontera plant at he 1500.
68557	2/25/2003	12:07	0:00	Transmission Security	Miscellaneous	center point reports their computer is back up.
68558	2/25/2003	12:10	0:00	Frequency Control	EECP	EXCELLON REPORTED HE IS BRINGING ON TWO LAPORT UNITS.
68554	2/25/2003	12:13	0:00	Frequency Control	EECP	RELI REPORTED [REDACTED] UNCOMMITTED RESORCE AT DENISON DAM. HOUR ENDING 1300 [REDACTED] HOUR ENDING 1400 [REDACTED].
68560	2/25/2003	12:20	0:00	Frequency Control	EECP	MIRANT REPORTED TWO NO TEXAS UNITS [REDACTED].IF THEY BRING THEM ON NOW WILL RUN OUT OF GAS BY 1900 TONIGHT . QUESTION NOW OR LATER. SUPV SAID LATER.THEY REPORTED THEY CANNOT EVEN GET GAS TO START THEN TO CONVERT TO OIL.
68559	2/25/2003	12:20	0:00	Transmission Security	OOMC OF RMR GENERATION	oomc to aep on laredo1 generation due to ercot implementation of eeep step1 1400-2200.
68561	2/25/2003	12:22	0:00	Transmission Security	RMR OOME	oome to laredo1/3 to full load for i.e. 1315-2000. due to ercot implementation of eeep step1
68562	2/25/2003	12:26	0:00	Transmission Security	RMR OOME	oome to aep on b_davis1 to full load for i.e. 1315-2000 due to ercot implementation of eeep step1.
68563	2/25/2003	12:28	0:00	Transmission Security	RMR OOME	oome to aep on riop6 to full load i.e. 1315-2000 due to ercot implementation of eeep step1
68581	2/25/2003	12:41	0:00	Frequency Control	EECP	EXCELLON REPORTED HANDLY 3 AND 4 WILL BE LIMITED TO [REDACTED] ON 3 AND [REDACTED] ON 4 DUE TO GAS. AT 1620 HE FOUND SOME GAS AND IS RELEASING 4 TO [REDACTED].
68565	2/25/2003	12:51	0:00	Frequency Control	Unit Trip	BTU LOST ATKINS 6.

68567	2/25/2003	12:57	0:00	Operating Period	Other	According to the MAI, UBS Bids are short compared to the expected UBS needed for hours 12,13,14, and 15:00. The shortages are 165, 437, 724, and 945 mw's respectively. Informed primary.
68566	2/25/2003	12:59	0:00	Frequency Control	EECP	RELI REPORTED CHANEL VIEW UNIT MAY BE ABLE TO RECONFIGURE AND PICK UP ■ MORE MWS EACH. GO FOR IT.
68568	2/25/2003	13:06	0:00	Day Ahead	All Other Notes	DAY A-HEAD A/S MARKET IS SHOWING TO BE A LITTLE SHORT FOR TOMORROW AFTERNOON, THE SHORTAGE IS NOT ENOUGH TO REOPEN TO SECOND MARKET, WE ARE BEING TOLD BY SEVERAL QSE'S THAT GAS CURTAILMENTS HAVE GOT THEM, SO GEN MAY NOT BE AVAILABLE ANYWAY.
68570	2/25/2003	13:10	0:00	Frequency Control	EECP	MIRANT AND STEC REPORTED SAN MIGUEL HAS ASH BUILD UP AND WILL DERATE ■■■■■. 1341 SM GOT ASH CLEARED COMING BACK UP.
68569	2/25/2003	13:15	13:23	Day Ahead	All Other Notes	DAY A-HEAD STARTED PROCUREMENT OF A/S SERVICES FOR FEB. 26, 2003. THE MARKET CLEARED AS MUCH AS WAS THERE, THE BIDS THAT WERE IN RED WERE BECAUSE THEY WERE LINKED BIDS, THE SYSTEM GOT ALL IT COULD.
68571	2/25/2003	13:18	0:00	Day Ahead	All Other Notes	THE QUESTION HAS BEEN ASKED ABOUT NSRS FOR TOMORROW, THE ANSWER IS THAT WHEN A/S REQ. WERE PUBLISHED THIS MORNING THERE WAS NO JUSTIFICATION FOR NSRS, IT WAS AROUND 0700 BEFORE WEATHER UPDATED WEATHER SHOWING THE NEED FOR NSRS AND IT WAS FOR APPROX. 4 HR'S. IN THE MORNING.
68572	2/25/2003	13:27	0:00	Transmission Security	Miscellaneous	■■■■ w/apx reports that they are instructed to shut down their frontera2 unit at 1500 as their gas will be cut off at that time, they are allowed a controlled shutdown of their generation, he reports that they are bringing on frontera3 until this shutdown is required.
68573	2/25/2003	13:42	0:00	Day Ahead	All Other Notes	DAY A-HEAD CALLED WEATHER BANK AGIN TO TALK TO THEM ABOUT THE TEMP. OUR LOCAL WEATHER IS CALLING FOR TEMP. TO REMAIN AT OR AROUND 30 DEG. THIS AFTERNOON, WEATHER BANK SAID THAT TEMP. WILL START UP SOME LATE THIS EVENING, BUT WOULD RE-RUN WEATHER AGIN IS SEE IF THINGS WOULD CHANGE.
68574	2/25/2003	13:59	0:00	Day Ahead	All Other Notes	DAY A-HEAD TENASKA CALLED TO SAY THAT THEY NOW HAVE AN ADDITIONAL ■■■■■ APPROX. FROM LARR THAT THEY SAID WAS UNAVAILABLE AT THE TIME A/S MARKET WAS PROCURED, THEY SAID IF WE OPENED A SECOND MARKET THAT THIS WOULD BE AVAILABLE.
68577	2/25/2003	14:14	0:00	Transmission Security	EECP	confirmed notification to tdsp of eecp step1 implementation earlier this p.m.
68575	2/25/2003	14:19	0:00	Transmission Security	OOME	CONTINUING TO OOME SILAS_9 THROUGH IE 24:00 DUE TO EECP STEP ONE. MOI OOME TOOL WILL NOT ALLOW FOR DISPATCHES TO BE SENT ON THIS UNIT. THE RESOURCE PLAN SHOWS IT TO BE AVAILABLE AND ON.
68576	2/25/2003	14:27	0:00	Transmission Security	OOME	OOMC'D AND OOME'D LA PALMA_G7 DUE TO EECP STEP ONE THROUGH IE 22:00.
68579	2/25/2003	15:00	0:00	Transmission Security	Transmission Limit Violations	aep reports being over on n_mcallen cb_105 over the limit, (■■■■■). frontera2/3 were forced off line due to loss of the gas supplies. bates1 is headed on line, expected on at 1600-1700.
68578	2/25/2003	15:05	0:00	Transmission Security	Generation Outage	frontera2/3 forced out of service due to loss of gas supplies.
68580	2/25/2003	16:12	0:00	Transmission Security	OOMC	apx has made frontera1/3 available for tomorrow, oomc to apx for frontera1/3 for i.e. 0400-1200.
68583	2/25/2003	16:29	0:00	Transmission Security	OOMC	frontera1/3 room's 0400-1200 on 2-26-02 for the duke_se edinburg, and cb105 at n_mcallen
68586	2/25/2003	16:40	0:00	Transmission Security	OOMC OF RMR GENERATION	bates1 unit on line due to loss of frontera2/3 generation.
68585	2/25/2003	16:47	17:02	Day Ahead	All Other Notes	DAY A-HEAD STARTED RESOURCE STUDY RPV-022603-JD ID#161526, HIT EXECUTE BUTTON BUT STUDY DID NOT START, LOOK THINGS OVER AND HIT START AGIN.

68588	2/25/2003	17:04	0:00	Day Ahead	All Other Notes	DAY A-HEAD NOTIFY/APPROVED RESOURCE STUDY RPV-022603-JD ID# 161526 FOR FEB. 26, 2003. ERCOT SYSTEM IS SHORT IN URS RRS WE HAVE ASKED FOR ALL WE CAN GET, QSE'S HAVE REPORTED GAS CURTAILMENTS. ??
68591	2/25/2003	17:20	0:00	Day Ahead	All Other Notes	DAY A-HEAD BUILT REPLACEMENT STUDY RCV-022603-JD ID#161640 FOR FEB. 26, 2003. AND STARTED STUDY AT 1722.
68606	2/25/2003	17:33	0:00	Transmission Security	Forced Outage	138 kv line - Tmp) Robertson - (TXU) Jewett - (TMPP) Hill Top lakes outage....forced out....patrolman in route.
68593	2/25/2003	17:35	0:00	Transmission Security	Line Outage	Indian Enron to West Yates line back in service at this time per [REDACTED] at AEP Corpus Christi
68596	2/25/2003	17:43	0:00	Frequency Control	Hot Line Call	Hot Line Call to all QSE's. Please update your Resource plans to show the most accurate estimation of what is available on each unit.
68607	2/25/2003	17:46	0:00	Transmission Security	Miscellaneous	Frontera units 1,2,3 are unavailable until 0600 hrs , 2-26-2003...due to gas curtailment or availability.... Unavailable 2-25-2003 ( 1800) to 2-26-2003 (0600) hrs...
68595	2/25/2003	17:50	0:00	Day Ahead	All Other Notes	DAY A-HEAD RECEIVED A CALL FROM OECC ABOUT OOMC'ING OECC CT21 AND UNIT #2 SO THEY CAN GET THE GAS FOR THE PLANT FOR TOMORROW.
68599	2/25/2003	17:56	0:00	Frequency Control	Unit Trip	APX: [REDACTED] Guadalupe #1 has to come down due to seal oil leak. Unit #4 will come up to cover.
68611	2/25/2003	18:15	0:00	Transmission Security	Limit Violations	RioP-Lapalma flow = [REDACTED] ...102 % ..load pickup, will continue to monitor...
68623	2/25/2003	18:15	0:00	Transmission Security	Limit Violations	Duke_SE Edin flow = [REDACTED] ...113.5%....
68600	2/25/2003	18:19	0:00	Frequency Control	Unit Trip	Texas Genco: [REDACTED] 18:17 Summers #2 tripped and lost [REDACTED]. No reason given for trip. 18:30 [REDACTED] called back to inform us that Summers tripped while trying to put oil burners in service.
68612	2/25/2003	18:21	0:00	Transmission Security	Limit Violations	NEdin-McColl flow = [REDACTED] ...129 % ... load pickup and Bates unit is coming to assist....All other generation is on and due to lack of system generation, didn't lower Duke or NEdin units.
68616	2/25/2003	18:21	0:00	Transmission Security	Limit Violations	Nedin-McColl flow = [REDACTED] ...129% on CB # 105 at N McAllen ( limiting factor) the breaker is at [REDACTED] and AEP will drop load if the flow get to or above [REDACTED] ...
68608	2/25/2003	18:29	19:20	Transmission Security	Limit Violations	MGSES-EAST contingency limit [REDACTED] ....system under transmission alert due to cold weather conditions. Returned back to normal after evening load pickup peak....
68618	2/25/2003	18:30	0:00	Day Ahead	All Other Notes	Went over weather and load details for 02/26/03, called on AEP to incorporate missing RMR units into their resource plan and to revise same as they were showing significant deficits for all hours.
68609	2/25/2003	18:51	0:00	Transmission Security	Limit Violations	MGSES - EAST flow = [REDACTED] ....112%
68610	2/25/2003	18:57	0:00	Transmission Security	Miscellaneous	MCSES #7 coming off line due to no gas to burn....After discussion, the unit can come down to minimum and run at [REDACTED]...therefore, the unit will be available for in the morning and want have any freezing problems..
68619	2/25/2003	19:00	0:00	Day Ahead	All Other Notes	AEP informed us that LA_PALMA # 5 could come available at 04:30, but to do so LA_PALMA 6 would have to be lowered, informed them that we would not gain anything by this so they should disregard bringing LA_PALMA 5 on.
68624	2/25/2003	19:15	0:00	Transmission Security	Forced Outage	Robertson-Jewett-Hilltop lake has the Robertson to White Chapel sectionalized and the load picked up....
68615	2/25/2003	19:28	0:00	Frequency Control	DC-E	Checked tomorrow's totals on the East and North ties with AEP. All totals matched for both ties.
68646	2/25/2003	19:30	0:00	Supervisor	EECP	I had Frequency Desk and Transmission Security Desk terminate the EECP step 1 at 19:30. We have enough generation, responsive, up balancing and frequency is at 60hz and above. It was posted in the MOI and MIS. [REDACTED] at SPP notified. [REDACTED] no answer on his cell phone but left message about the EECP and that we will continue with a Cold Weather Alert and Transmission Alert through 10:00 2/26/03.

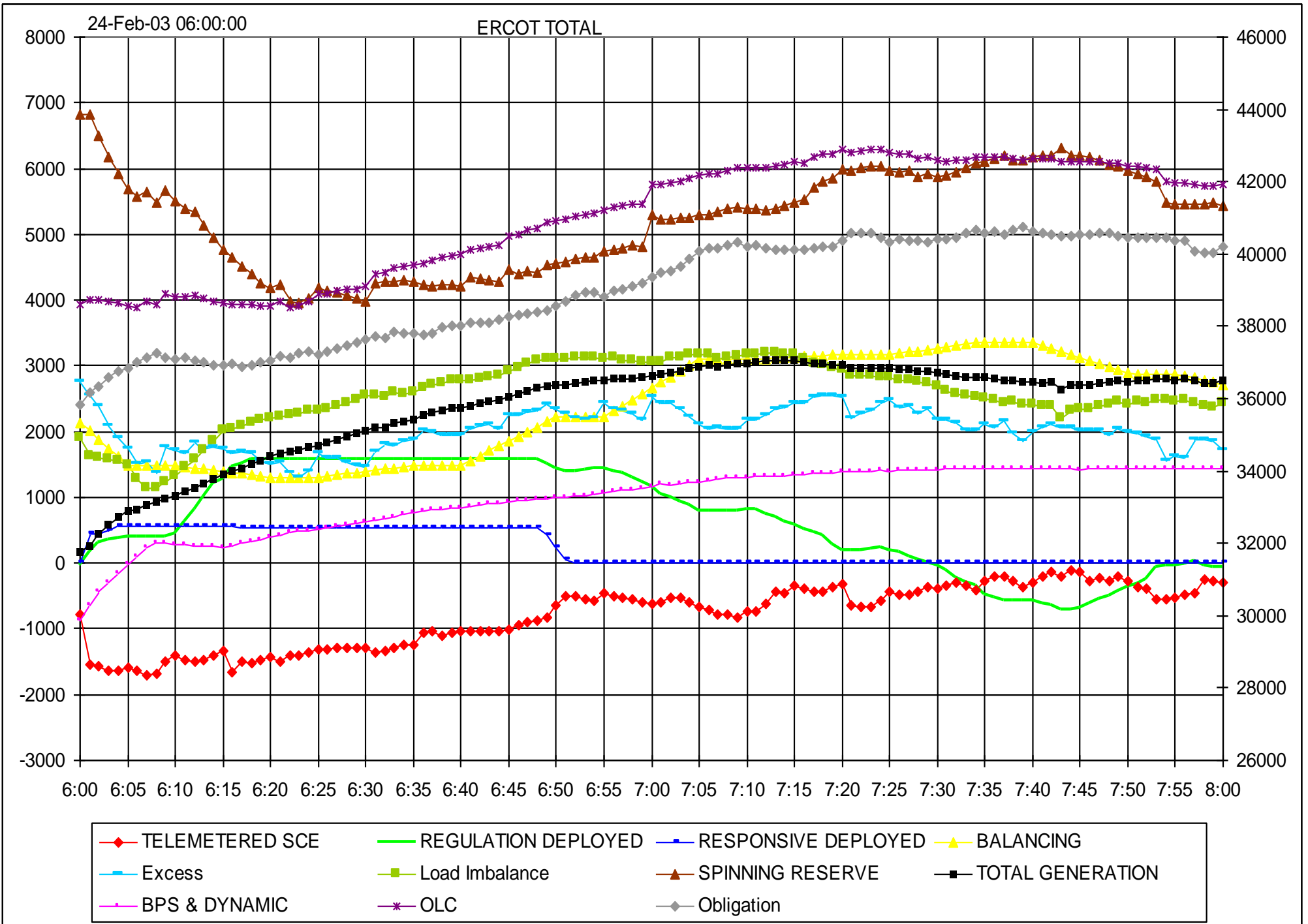


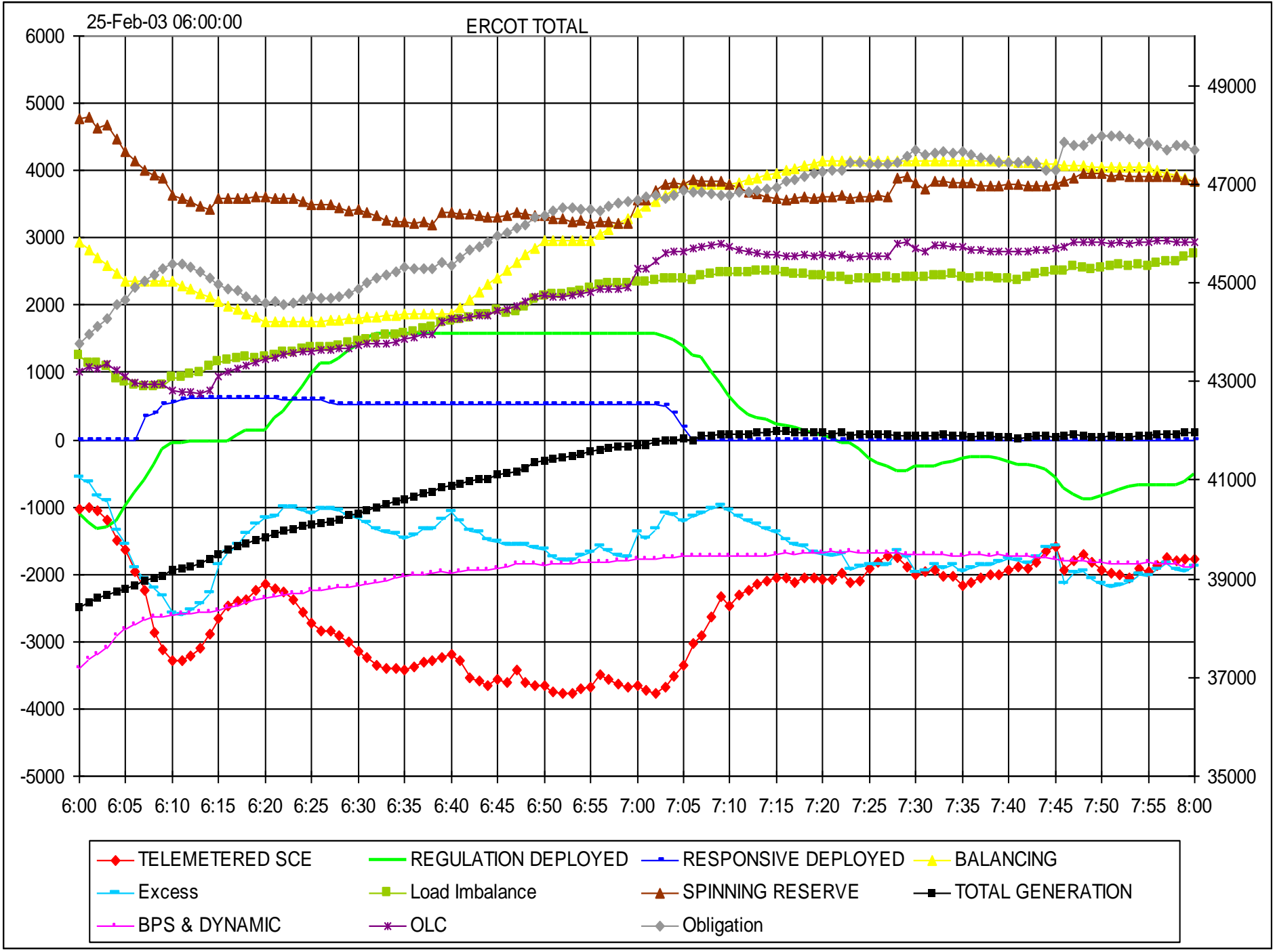
68613	2/25/2003	19:30	0:00	Frequency Control	EECP	EECP 1 canceled as of 1930 / 2-25-03.
68625	2/25/2003	19:30	0:00	Transmission Security	EECP	EECP #1 terminated.
68614	2/25/2003	19:30	0:00	Transmission Security	EECP	EECP 1 canceled as of 1930 / 2-25-03.
68605	2/25/2003	19:39	0:00	Frequency Control	Verbal dispatch	TXU: [REDACTED] VDI #s F022503-01, F022503-04, F022503-05. Called [REDACTED] to recall the above VDI's for a total of [REDACTED]. He will start to pull out [REDACTED] at 1945. When the generation catches up he will pull the remaining [REDACTED].
68626	2/25/2003	19:48	0:00	Transmission Security	Limit Violations	Rio-LaPalma flow = [REDACTED] ...100%...back within limits...
68627	2/25/2003	19:48	0:00	Transmission Security	Limit Violations	Duke-SE Edin flow = [REDACTED] ...112% ...
68628	2/25/2003	19:48	0:00	Transmission Security	Limit Violations	NEdin- McColl flow = [REDACTED] ...126 %...on CB # 105 at N McAllen limited to [REDACTED] ...
68684	2/25/2003	20:00	0:00	Supervisor	Heat Tags	OPC115 (supervisors console) keeps shutting down on its own. Heat tag 00031613 was made to have this fixed.
68629	2/25/2003	21:21	0:00	Transmission Security	OOMC OF RMR GENERATION	Con't OOME on LaPalma #6 from 2015-2300 at [REDACTED] due to Rio Lapalma flow = [REDACTED] ....93 %...
68632	2/25/2003	22:00	0:00	Transmission Security	Miscellaneous	NEdin-McColl constraint tool activated to assist in lowering the flow on the NEdin- McColl Rd [REDACTED], and the Duke - SE Edin [REDACTED]....
68635	2/25/2003	22:30	0:00	Transmission Security	OOMC OF RMR GENERATION	LaPalma 6 OOME con't but lowered from [REDACTED] for interval 2315-2400....
68636	2/25/2003	22:34	0:00	Transmission Security	OOMC OF RMR GENERATION	Laredo 3 oome con't but lowered from [REDACTED] for interval 2315-2400....laredo import = [REDACTED] ....
68649	2/25/2003	22:36	10:00	Supervisor	Alert	I had the Frequency and Transmission Desk issue a Cold Weather Alert starting at 23:00 2/25/03 through 10:00 2/26/03, due to freezing drizzle and mid 20's in Dallas, Austin, San Antonio and Abilene.
68650	2/25/2003	22:36	10:00	Supervisor	Alert	I had the Frequency and Transmission Desk issue a Transmission Alert due to operating above first contingency transmission limits starting 23:00 2/25/03 through 10:00 2/26/03.
68630	2/25/2003	22:40	0:00	Transmission Security	Alert	Transmission Alert issued from 2300 2-25-03 thru 1000 hrs on 2-26-2003 due to operation outside first contingency limits in the valley.... interval: 2300 (2/25) thru 1000 (2/26).
68637	2/25/2003	22:46	0:00	Transmission Security	Limit Violations	Duke-SE Edin flow = [REDACTED] ....98 %...back within limits....load falling off
68638	2/25/2003	22:52	0:00	Transmission Security	Forced Outage	69 kv line - BenHur - Hilltop Lakes-Hearn has the section Kosse to Petteway sectionalized and the load picked up....cause: under investigation.....
68631	2/25/2003	22:58	0:00	Transmission Security	Alert	Cold Weather Alert issued form 2/25 at 2300 to 2/26 at 1000 hrs....Additional freezing precipitation is expected and very cold temperatures across the state.
68633	2/25/2003	23:00	0:00	Frequency Control	ADVISORY	ERCOT has issued a Cold Weather Alert starting at 23:00 / 2-25-03 through 10:00 / 2-26-03.
68634	2/25/2003	23:00	0:00	Transmission Security	Alert	ERCOT has issued a Cold Weather Alert starting at 23:00 / 2-25-03 through 10:00 / 2-26-03.
68661	2/25/2003	23:04	0:00	Frequency Control	Verbal dispatch	Texas Genco: [REDACTED] VDI # F022503-06 Lower generation by [REDACTED]. Frequency at 60.11 and rising.
68680	2/25/2003	23:04	0:00	Frequency Control	Verbal dispatch	TX Genco: [REDACTED] Lower generation by [REDACTED]. Frequency at 60.11 Ended at 2330.
68682	2/25/2003	23:10	0:00	Frequency Control	Verbal dispatch	AEP: [REDACTED] VDI#F022503-07 Lower generation by [REDACTED]. Frequency at 60.101 Out of regulation down. Ended VDI at 2330.

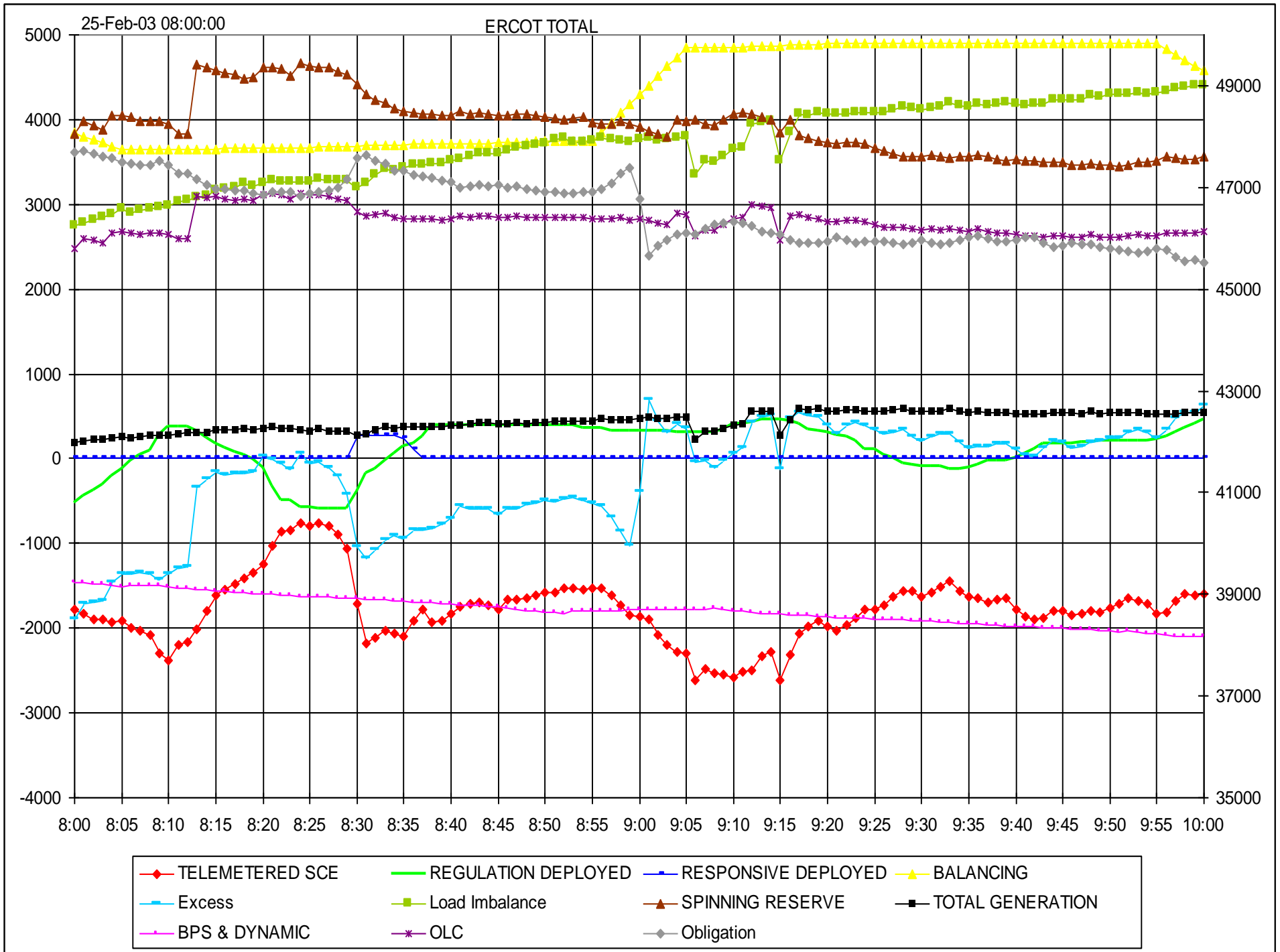
68663	2/25/2003	23:10	0:00	Frequency Control	Verbal dispatch	AEP: [REDACTED] VDI# F022503-07 Lower generation by [REDACTED]. Frequency at 60.101 and out of responsive.
68645	2/25/2003	23:32	23:34	Operating Period	Resource Plan	called tenaska about rrs deficit based on h.a. study 01
68647	2/25/2003	23:48	0:00	Transmission Security	OOMC OF RMR GENERATION	laredo #3 oome con't but raised to [REDACTED] due to Laredo Import flow = [REDACTED]...98%....interval 0015-0200.
68648	2/25/2003	23:49	0:00	Transmission Security	OOMC OF RMR GENERATION	Bates #1 oome con't due to flow on the nedin-Mccoll at 98% and the cb # 105 at McAllen at 100%.... [REDACTED]....0015-0200 interval.

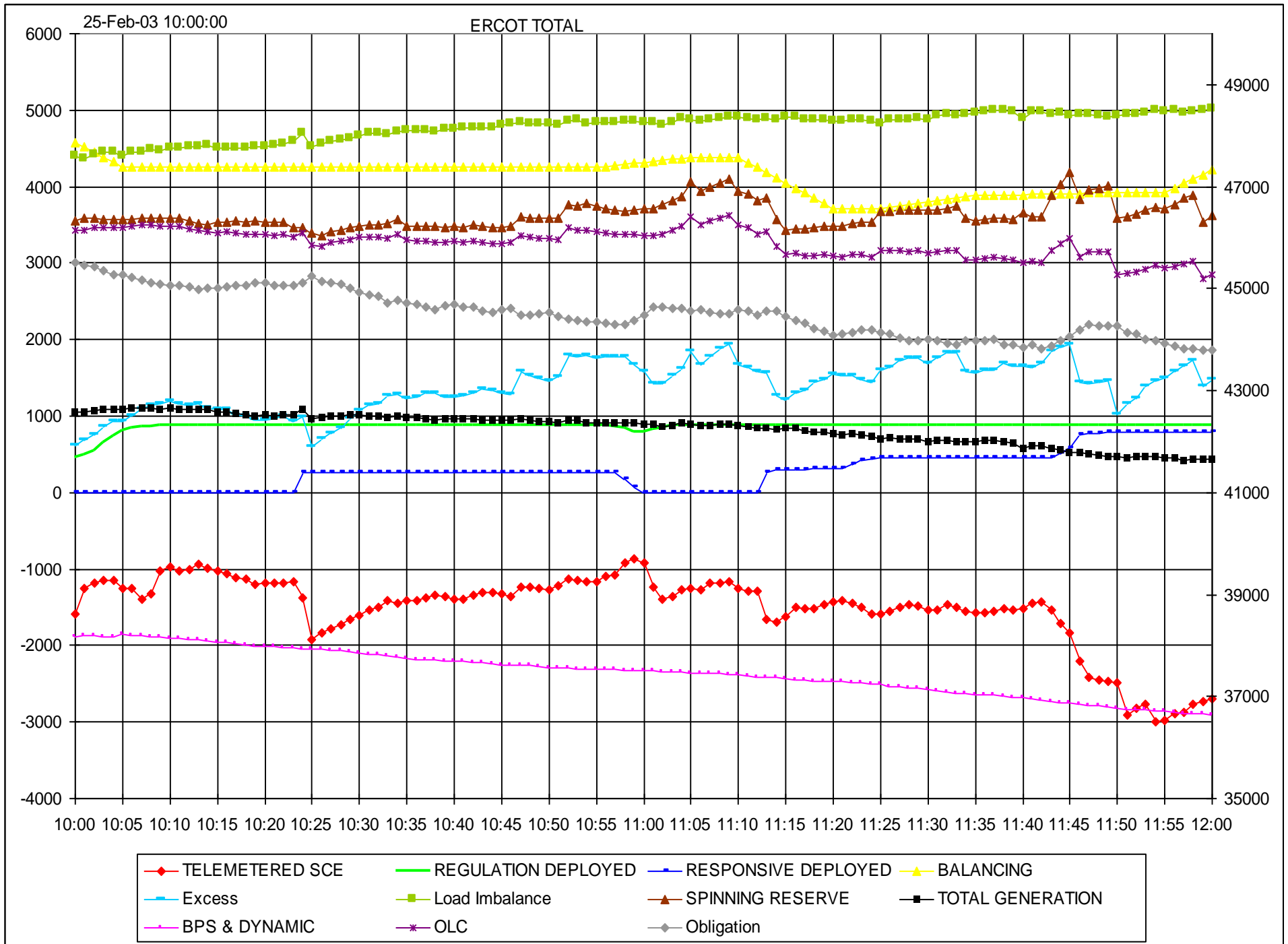


Appendix 2. ERCOT Graphs supplied to the ERCOT Frequency Control Task Force



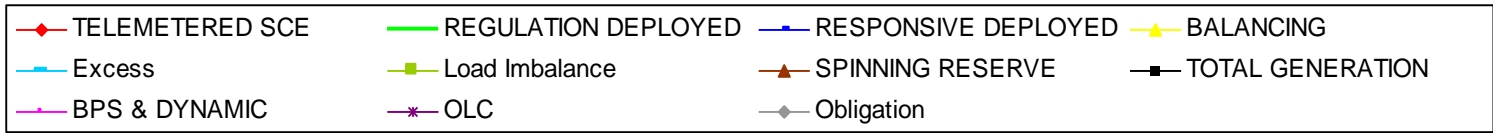
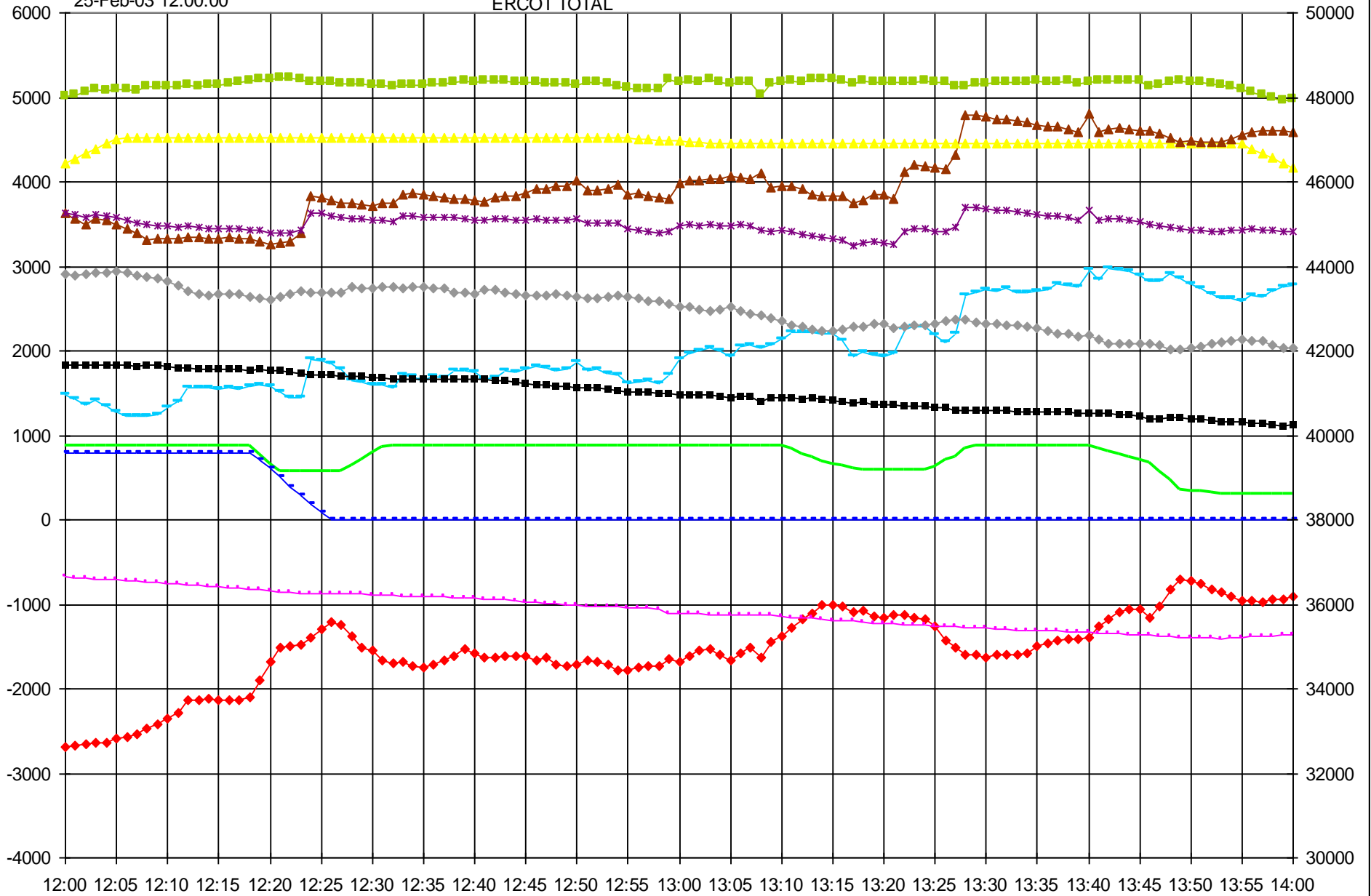




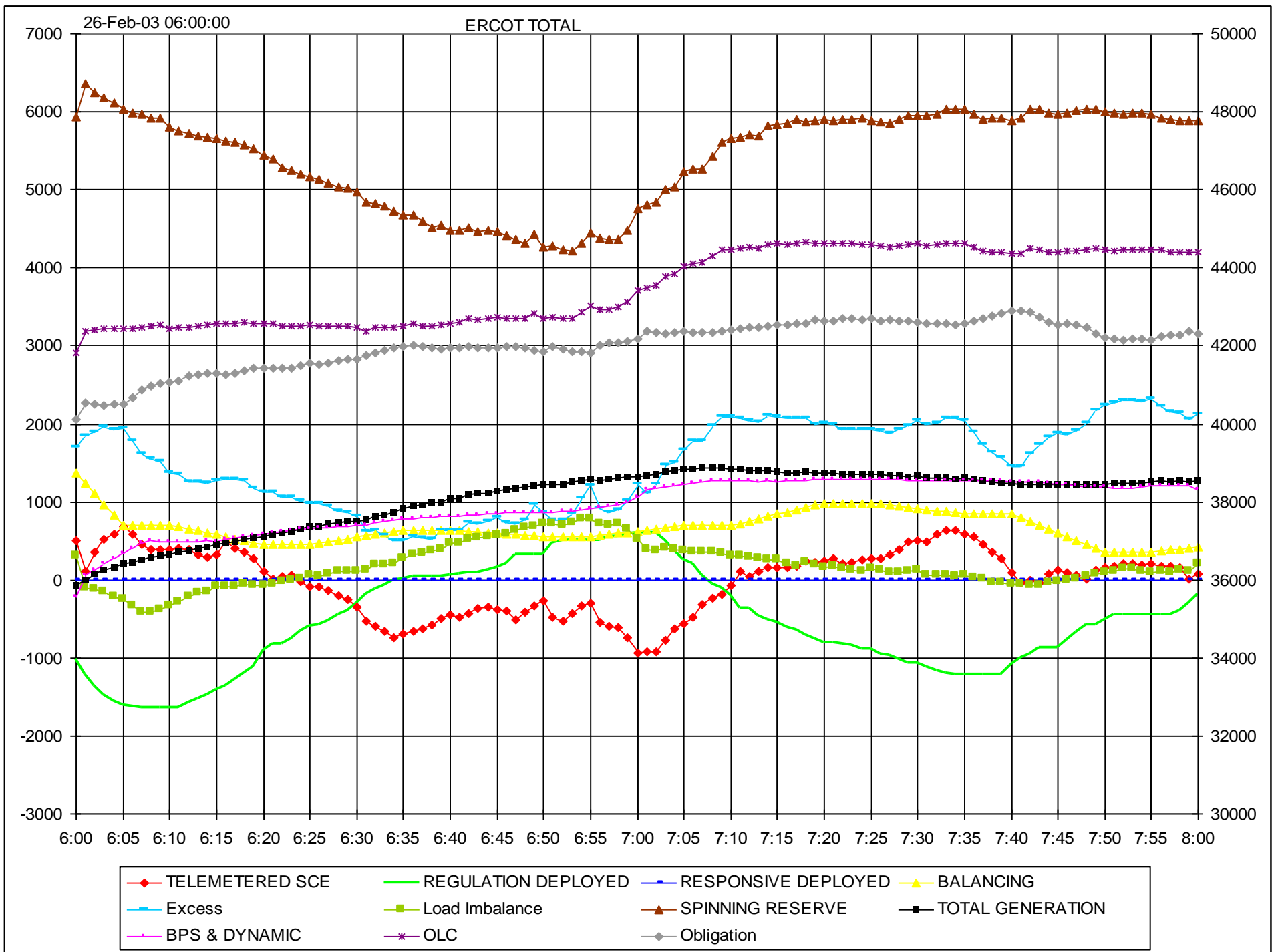


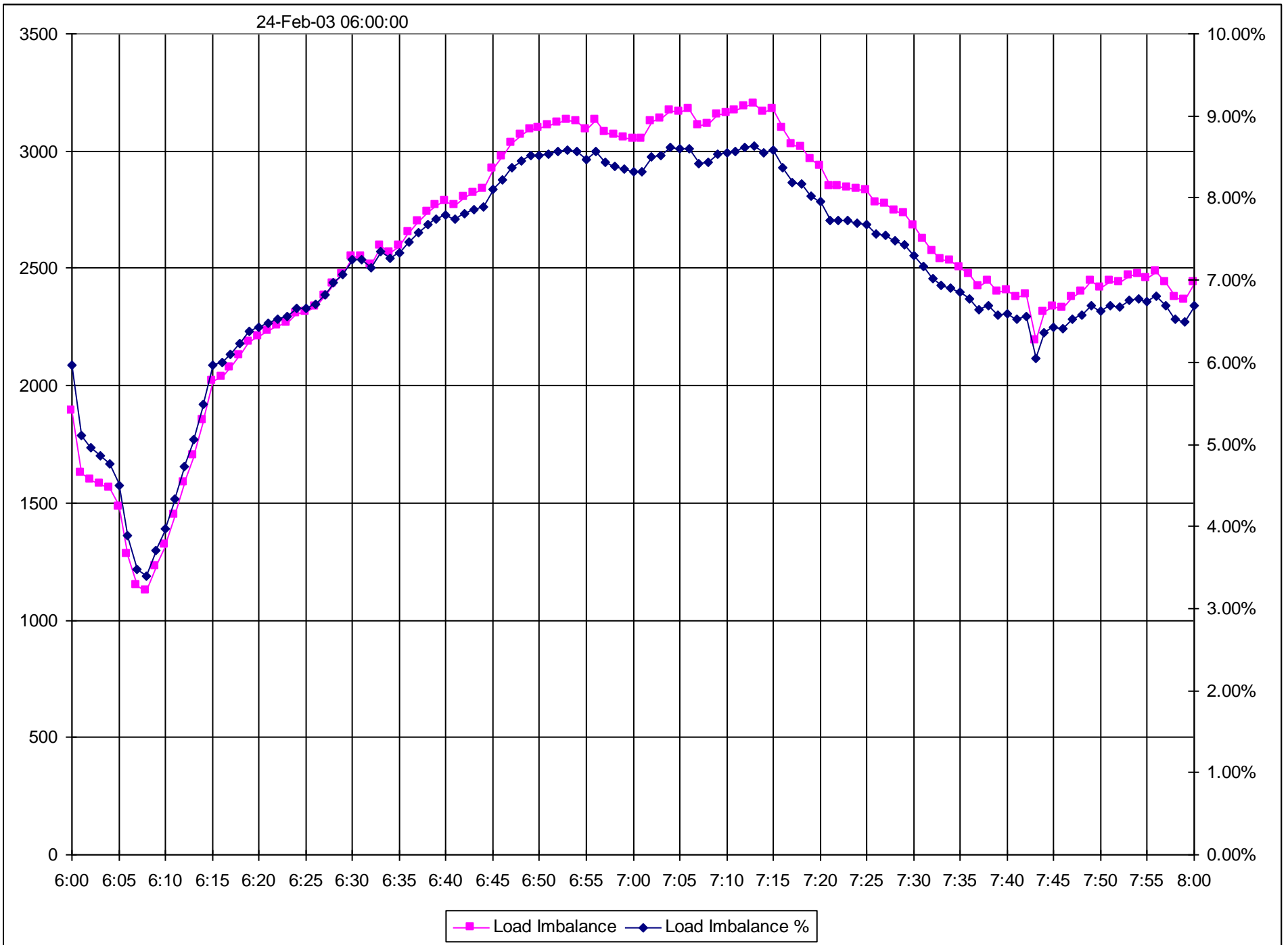
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### ERCOT TOTAL

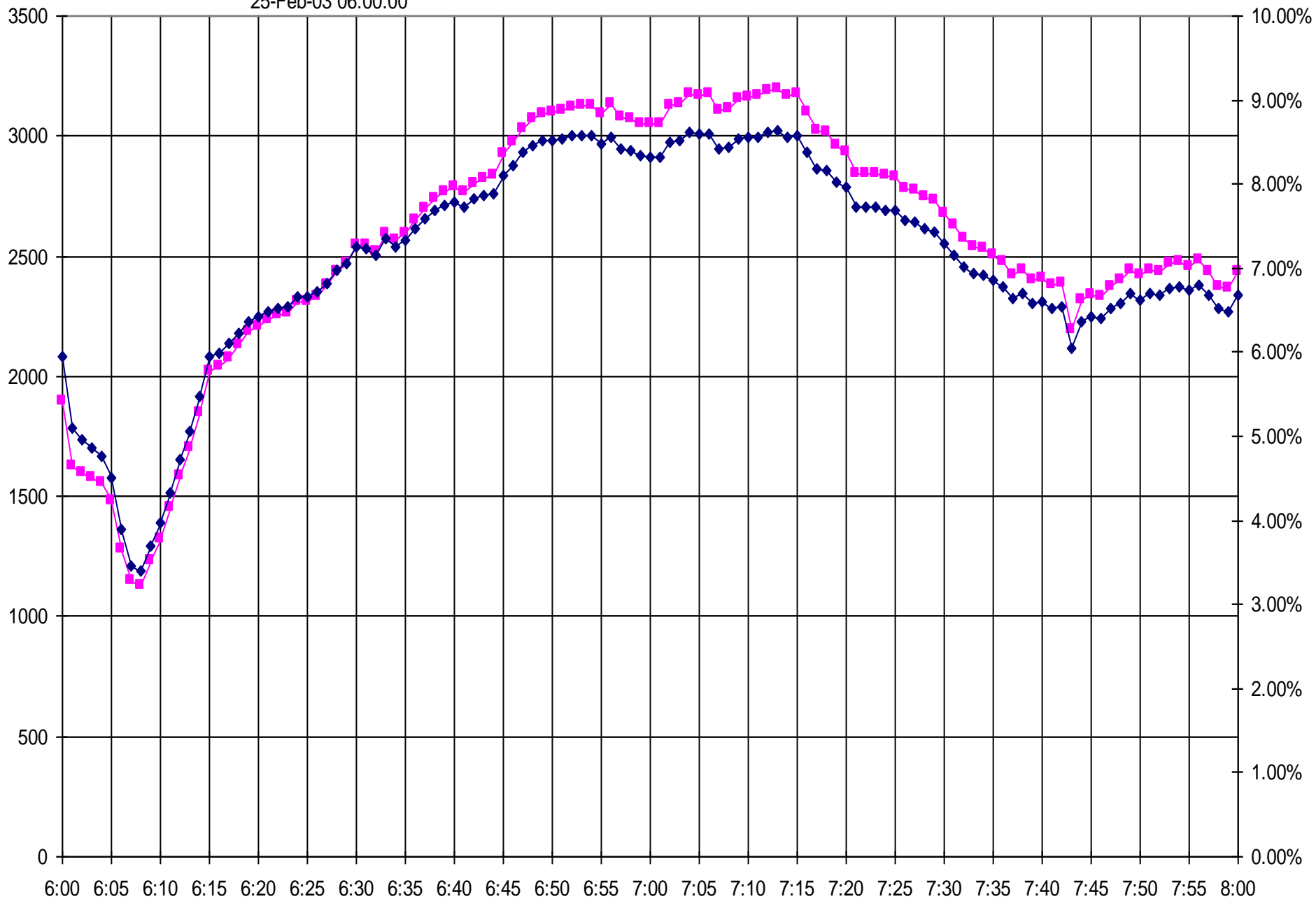






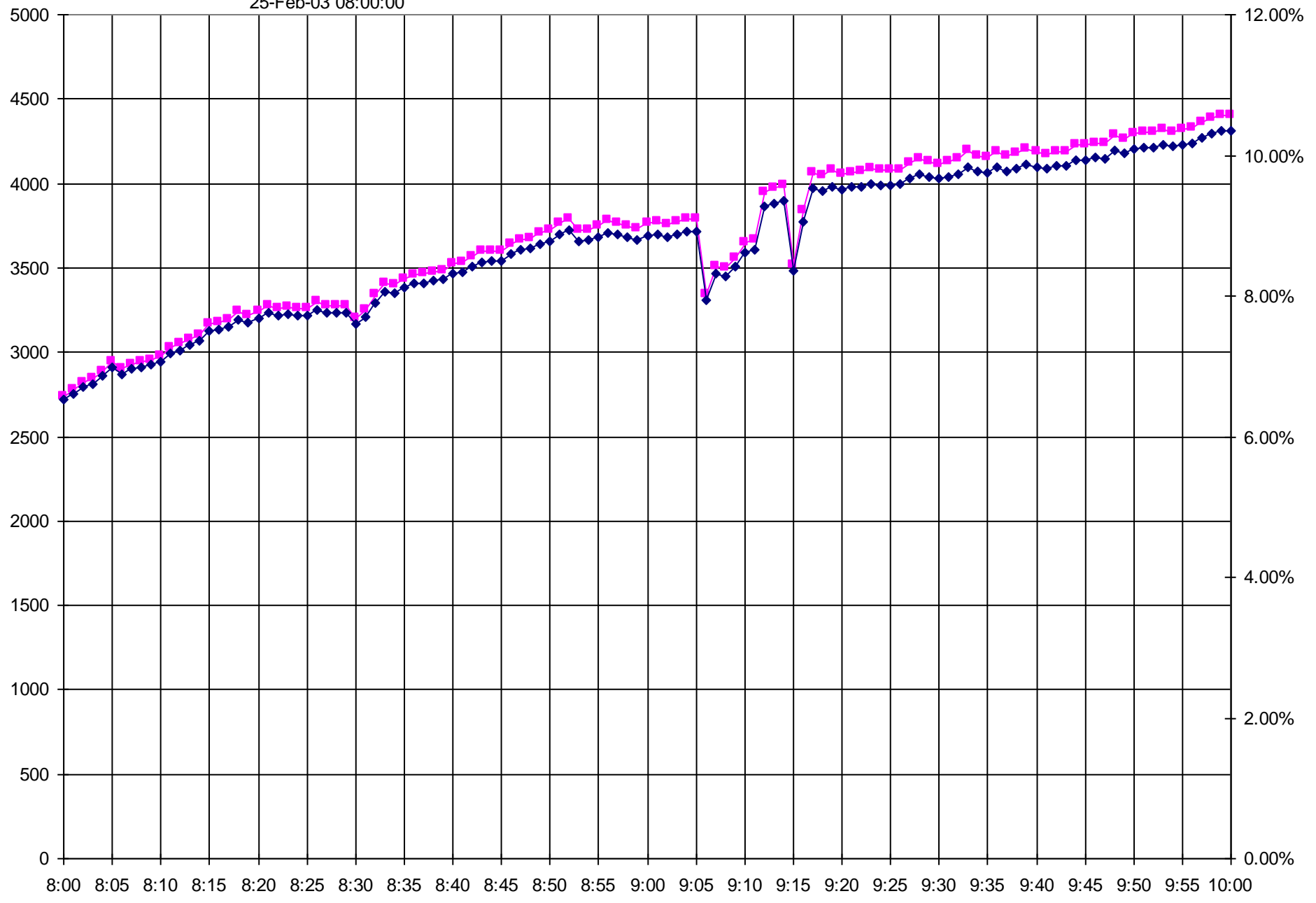


25-Feb-03 06:00:00

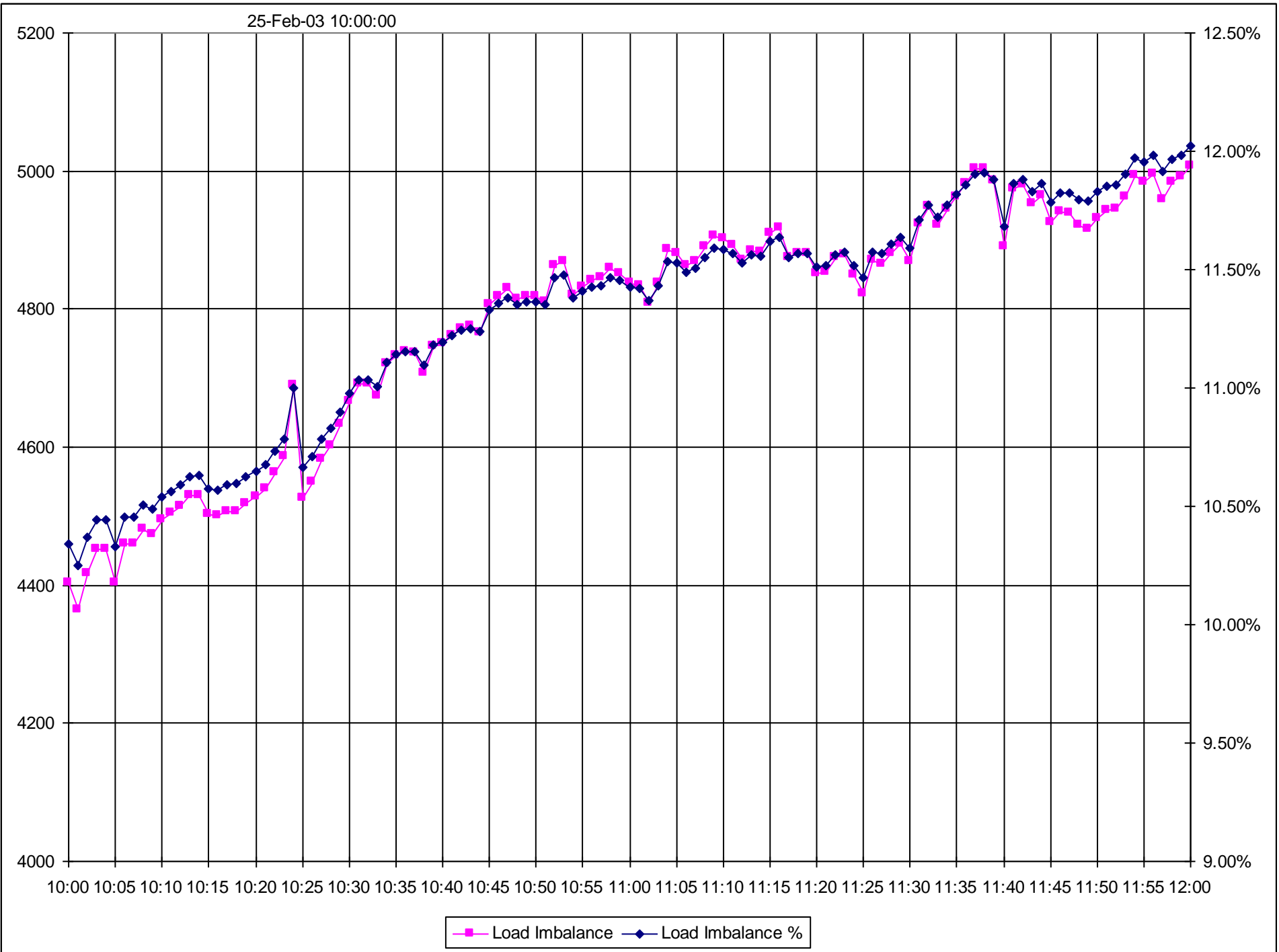


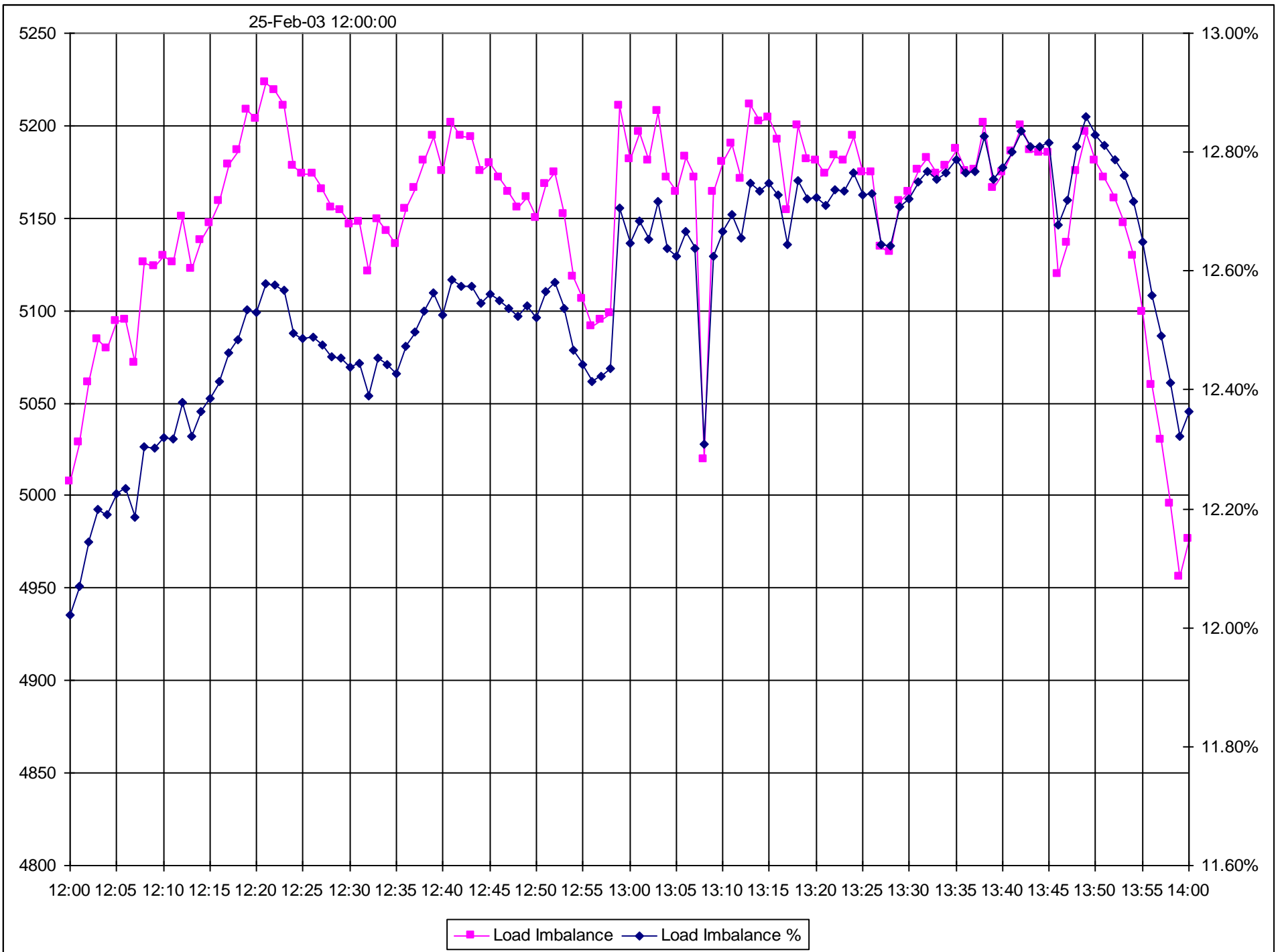
—■— Load Imbalance —◆— Load Imbalance %

25-Feb-03 08:00:00

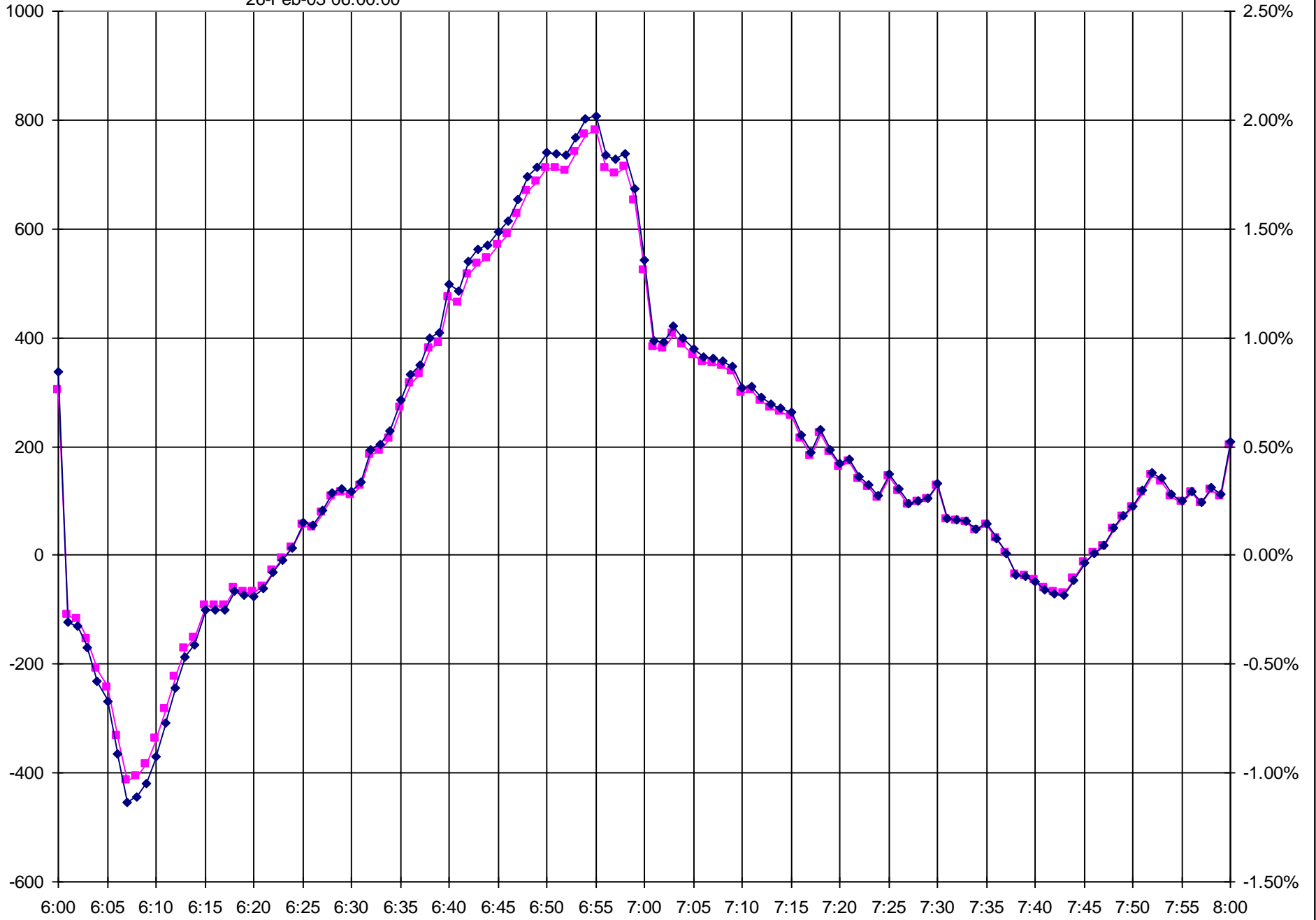


—■— Load Imbalance —◆— Load Imbalance %





26-Feb-03 06:00:00



—■— Load Imbalance —◆— Load Imbalance %

# GOVERNOR RESPONSE

