



Demand Integration Update to DSWG

ERCOT Staff

DSWG Meeting

2/08/2013

- Feb-May 2013 Procurement Results
- 30-Minute ERS Pilot Update
 - Test Results for Oct 30 and Nov 20 Test Deployments
 - Status of 30-Minute ERS Pilot
- 30-Minute ERS Scenario Training
- NPPR519 Exemption of ERS-Only QSEs from Collateral and Capitalization Requirements
- Discuss Changing ERS Time Periods/Contract Periods
- DSWG Input on possible ERS Workshop

30-Minute ERS Pilot Procurement for FebMay13

Time Period	Bus. Hrs. 1 HE 0900 – 1300, M-F except Holidays	Bus. Hrs. 2 HE 1400 – 1600, M-F except Holidays	Bus. Hrs. 3 HE 1700 – 2000, M-F except Holidays	Non-Bus. Hrs. All Other Hours
Capacity Offered	106.261 MW	106.300 MW	95.276 MW	82.605 MW
Capacity Procured	72.961 MW	72.900 MW	58.976 MW	40.505 MW
Capacity Rejected	33.3 MW	33.4 MW	36.3 MW	42.1MW
Number of Resources Offered (number of aggregations)	60 (24)	59 (24)	55 (22)	35 (16)
Number of Resources Rejected	2	2	2	2
Clearing Price	\$7.81	\$8.60	\$8.90	\$7.80

ERS 10 Procurement for FebMay13

Time Period	Bus. Hrs. 1 HE 0900 – 1300, M-F except Holidays	Bus. Hrs. 2 HE 1400 – 1600, M-F except Holidays	Bus. Hrs. 3 HE 1700 – 2000, M-F except Holidays	Non-Bus. Hrs. All Other Hours
Capacity Offered	457.700 MW	456.475 MW	440.825 MW	383.610 MW
Capacity Procured	457.700 MW	456.475 MW	440.825 MW	383.610 MW
Capacity Rejected	0.00 MW	0.00 MW	0.00 MW	0.00 MW
Number of Resources Offered (number of aggregations)	392 (88)	394 (89)	378 (84)	356 (878)
Number of Resources Rejected	0	0	0	0
Highest Offer Accepted	\$ 8.75	\$ 9.75	\$ 9.75	\$ 8.75
Avg. Cost MW / Hour	\$8.10	\$8.71	\$8.82	\$8.04

30-Minute ERS Pilot Test Event Results

4th Test Event – Oct 30

Obligation: 82.33 MW

Load Reduction: 93.95 MW

5th Test Event – Nov 20

Obligation: 80.28 MW

Load Reduction: 89.32 MW

BH2

BH1

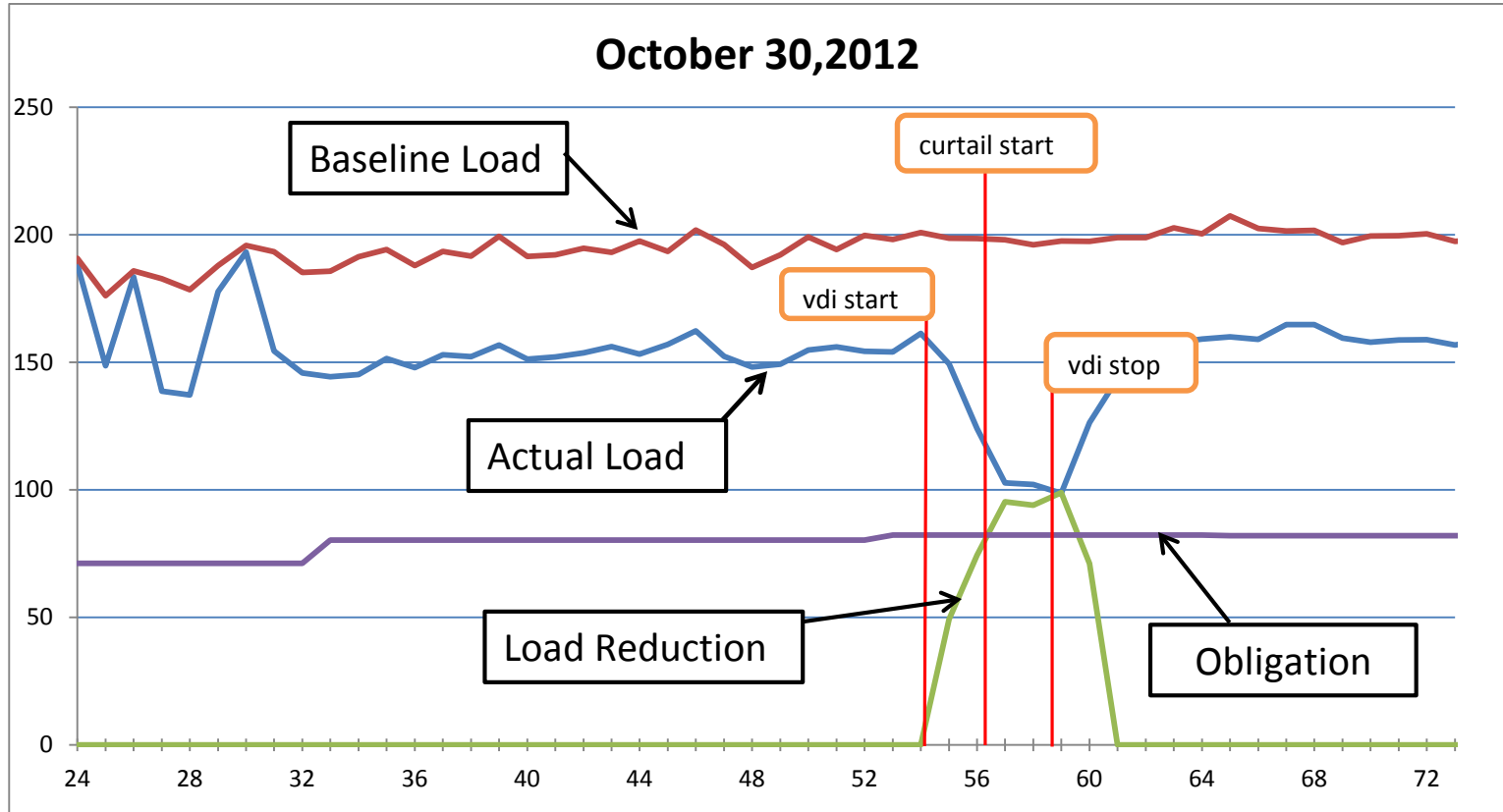
Oct2012-Jan2013 CP

30-Minute ERS Pilot Test Event Results

Test # 4 - 10/30/2012			
Resource	Event Performance Factor *	First Full Interval	
		Obligation (MW)	Load Reduction (MW)
Resource1	0.877	4.50	2.22
Resource2	1.000	0.80	1.03
Resource3	1.000	0.80	1.27
Resource4	1.000	0.20	0.21
Resource5	1.000	0.10	0.16
Resource6	0.47	0.15	0.11
Resource7	0.178	0.18	0.00
Resource8	1.000	0.55	0.42
Resource9	0.456	0.85	0.27
Resource10	1.000	2.20	3.46
Resource11	0.694	1.70	1.01
Resource12	0.115	2.00	0.00
Resource13	0.714	1.00	0.14
Resource14	0.728	0.60	0.43
Resource15	1.000	4.73	5.46
Resource16	1.000	1.60	1.44
Resource17	0.992	0.2	0.22
Resource18	0.082	0.2	0.01
Resource19	1.000	0.2	0.26
Resource20	1.000	0.3	0.31
Resource21	1.000	0.8	1.10
Resource22	1.000	0.2	0.29
Resource23	1.000	0.3	0.38
Resource24	0.955	18	16.62
Resource25	1.000	2.6	3.37
Resource26	1.000	0.43	0.37
Resource27	1.000	0.55	0.44
Resource28	1.000	34.00	50.61
Resource29	0.081	0.10	0.00
Resource30	0.963	2.50	2.34
Fleet	1.342	82.33	93.95
	* Includes First Partial Interval		

A change in color between resources represents a different QSE

30-Minute ERS Pilot Test Event Results

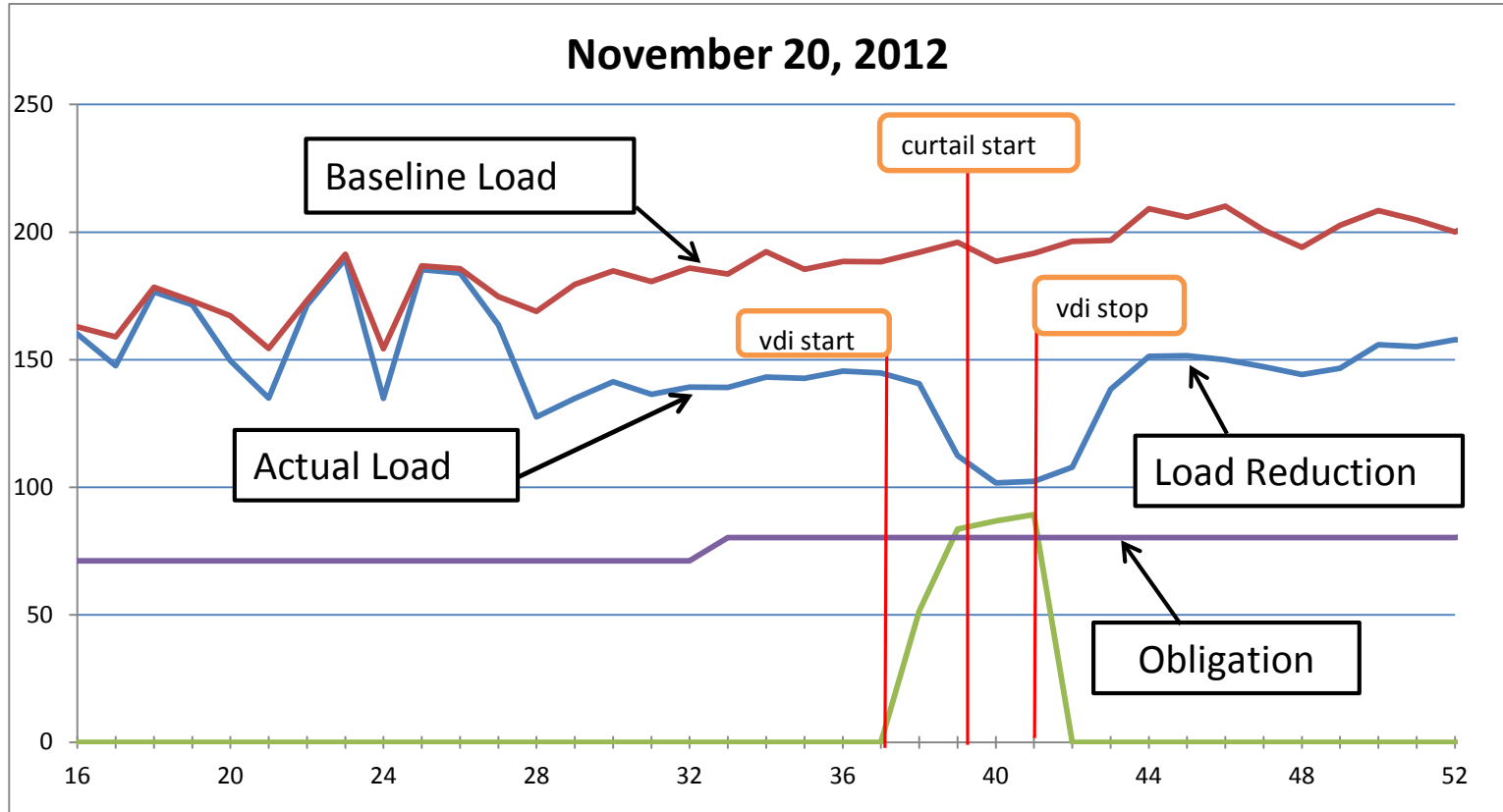


30-Minute ERS Pilot Test Event Results

Test # 5 - 11/20/2012			
Resource	Event Performance Factor *	First Full Interval	
		Obligation (MW)	Load Reduction (MW)
Resource1	1.000	4.50	5.06
Resource2	0.000	0.80	0.00
Resource3	0.080	0.80	0.07
Resource4	1.000	0.20	0.20
Resource5	0.000	0.10	0.00
Resource6	0.000	0.15	0.00
Resource7	0.261	0.18	0.00
Resource8	1.000	0.60	0.40
Resource9	0.067	0.75	0.01
Resource10	1.000	2.20	3.55
Resource11	0.486	1.00	0.00
Resource12	1.000	1.60	1.21
Resource13	0.774	1.70	1.14
Resource14	0.957	0.60	0.55
Resource15	0.370	2.00	1.46
Resource16	1.000	4.73	5.23
Resource17	1.000	0.20	0.20
Resource18	1.000	0.30	0.36
Resource19	0.957	2.60	3.63
Resource20	0.672	18.00	10.52
Resource21	1.000	0.20	0.23
Resource22	1.000	0.20	0.33
Resource23	1.000	0.80	1.00
Resource24	0.115	0.20	0.03
Resource25	1.000	0.30	0.42
Resource26	1.000	0.43	0.41
Resource27	1.000	0.55	0.56
Resource28	1.000	32.00	49.25
Resource29	1.000	0.10	0.19
Resource30	1.000	2.50	3.29
Fleet	1.231	80.28	89.32
	* Includes First Partial Interval		

A change in color between resources represents a different QSE

30-Minute ERS Pilot Test Event Results



Resource XYZ – Obligations per time period: BH1-3 MW, BH2-3 MW, BH3-2 MW, NBH-2 MW

7:17:12	Start of VDI	Non Business Hours(after 8pm & before 8am)
8:18:31	Recall	Business Hours 1 (8am -1pm)

Resource XYZ do Expected Response

- By the end of the 30 minute ramp period (7:47:12) meet NBH obligation of 2 MWs.
- At 8:00:00 increase response to meet BH1 obligation of 3 MWs.
- At 8:18:31 start of recovery period, return to normal operations.

Resource XYZ – Obligation per time period: BH1-3 MW, BH2-2 MW, BH3-0 MW, NBH-2 MW

15:00:00	Start of VDI	Business Hours 2 (1pm-4pm)
20:30:00	Recall	Non Business Hours(after 8pm & before 8am)

Resource XYZ do Expected Response

- By the end of the 30 minute ramp period (15:30:00) meet BH2 obligation of 2 MWs.
- During BH3 should meet it's changing obligation during the sustained response period.
- At 20:00:00 meet NBH obligation of 2 MWs.
- At 20:30:00 start of recovery period, return to normal operations.

Resource XYZ – Obligation per time period:

BH1-3 MW, BH2-3 MW, BH3-2 MW, NBH-2 MW

Resource ABC - Obligation per time period:

BH1-1 MW, BH2-3 MW, BH3-0 MW, NBH-2 MW

12:00:00	Start of VDI	Business Hours 1 (8am -1pm)
20:30:00	Recall	Non Business Hours(after 8pm & before 8am)

Resource XYZ and ABC Expected Response

- By the end of the 30 minute ramp period (12:30:00) Resources XYZ & ABC should meet BH1 obligation of 3 MWs & 1 MW respectively.
- At 13:00:00 Resource XYZ should continue to meet its 3 MW obligation, Resource ABC should increase response to meet its increased obligation for BH2 of 3 MWs.
- At 16:00:00 Resource XYZ should meet BH3 obligation of 2 MWs while Resource ABC should meet it's changing obligation during the sustained response period.
- At 20:00:00 Both Resource XYZ and ABC should meet their NBH obligation of 2 MWs.
- At 20:30:00 start of recovery period, return to normal operation.