



Emergency Interruptible Load Service

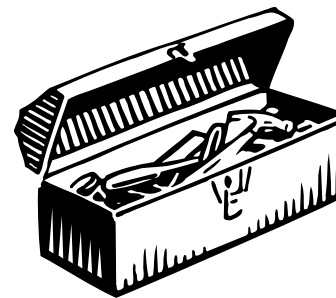
Status Report

ERCOT Board of Directors
17 November 2008

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EILS is:

- **An additional emergency tool for ERCOT operators to reduce the likelihood of involuntary firm load shedding (a.k.a. rolling blackouts)**
- **Service provided by Loads willing to interrupt during an electric grid emergency in exchange for a payment**
- **Deployed ONLY in the late stages of a grid emergency (EECP Step 3) as a last resort prior to firm load shedding (rotating outages)**

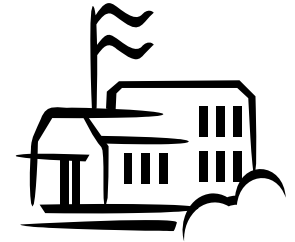
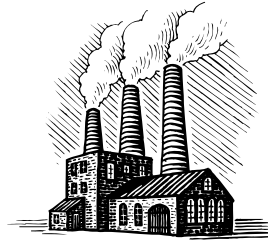


'Another tool for the operator toolbox'

Eligibility: Who can participate?

- **EILS Resources**

- Individual Loads
- Aggregations



- **Must have:**

- 15-minute interval metering
 - Or a statistically valid sample approved by ERCOT
- Capability of interrupting at least 1 MW of load on 10 minutes notice at any time during the committed hours
- Representation by a QSE with a wide-area network agreement with ERCOT
 - Must have 24/7 operations that can receive the verbal dispatch instruction
 - QSE is responsible for notifying its EILS Resources

- **1,000 MW ceiling (has not been met to date)**
- **Procured for 4-month Contract Periods**
 - February thru May
 - June thru September (4CP months)
 - October thru January
- **Time Periods:**
 1. Business Hours 1: 8AM to 1PM Monday-Friday*
 2. Business Hours 2: 1PM to 4PM Monday-Friday*
 3. Business Hours 3: 4PM to 8PM Monday-Friday*

* Except ERCOT Holidays

 4. Non-Business Hours: All other hours
- **Time Periods are designed to allow flexibility for customers during traditional business hours**
- **Participants must have their interruptible load available during at least 95% of the hours in their committed Time Period(s)**

- **EILS is dispatched via VDI to the all-QSE hotline**



- **EILS Resources must shed at least 95% of their committed load within 10 minutes of QSEs' receipt of the instruction**
- **EILS Resources must keep their committed load off until released**
- **ERCOT Operations will release EILS Resources after LaaRs have been recalled and generation providing Responsive Reserves has been restored**
- **EILS Resources have 10 hours to return to service after release**

Load acting as a Resource (LaaR) Responsive Reserve Service (RRS) & EILS Comparison Checklist

	LaaR providing RRS	EILS
Deployment time (VDI)	10 minutes	10 minutes
Deployment trigger	EECP Step 2 and frequency events	EECP Step 3
Under-Frequency Relay	≥ 59.7 Hz	Not Required
Telemetry	Required	Not Required
IDR metering	Required	Required (or ERCOT-approved statistical sample)
Procurement	Day-ahead AS market	RFP for 4-month Contract Periods
Payment	Market Clearing Price	As-bid if selected
QSE Self-Provision	Allowed	Allowed
Testing	Unannounced (annual)	Unannounced (annual)

- **April-May 2007 Contract Period**
 - 156 MW of bids received
 - Did not meet 500 MW minimum
- **June-Sept. 2007 Contract Period**
 - 213 MW of bids received
 - Did not meet 500 MW minimum
- **Oct. 2007 – Jan. 2008 Contract Period**
 - 170 MW of bids received (Business Hours)
 - 180 MW of bids received (Non-Business Hours)
 - Did not meet 500 MW minimum

- **February thru May 2008 Contract Period**

Time Period	Business Hours	Non-Business Hours
Definition	8 AM to 8 PM Mon-Fri except Holidays	All other hours
EILS Procured	262 MW	185 MW
# of EILS Resources	10 (includes 5 aggregations)	7 (includes 2 aggregations)
Avg. Cost per MW per Hour	\$9.73	\$7.86
RRS Avg. Cost MW/Hr. (for comparison)	\$36.09	\$24.92

- **Total cost for this Contract Period: \$5.3 million**

Procurement History (cont.)

- **June thru September 2008 Contract Period**

Time Period	Business Hours	Peak Hrs. 1	Peak Hrs. 2	Non-Business Hours
Definition	8 AM to 1 PM Mon-Fri except Holidays	1 PM to 4 PM Mon-Fri except Holidays	4PM to 8 PM Mon-Fri except Holidays	All other hours
EILS Procured	310 MW	219 MW	216 MW	216 MW
# of EILS Resources	19 (includes 13 aggregations)	16 (includes 10 aggregations)	15 (includes 9 aggregations)	14 (includes 8 aggregations)
Avg. Cost per MW per Hour	\$10.92	\$11.06	\$11.29	\$8.97
RRS Avg. Cost MW/Hr. (for comparison)	\$29.98	\$55.52	\$75.78	\$24.10

- **Total projected cost for this Contract Period: \$6.6 million**

Procurement History (cont.)

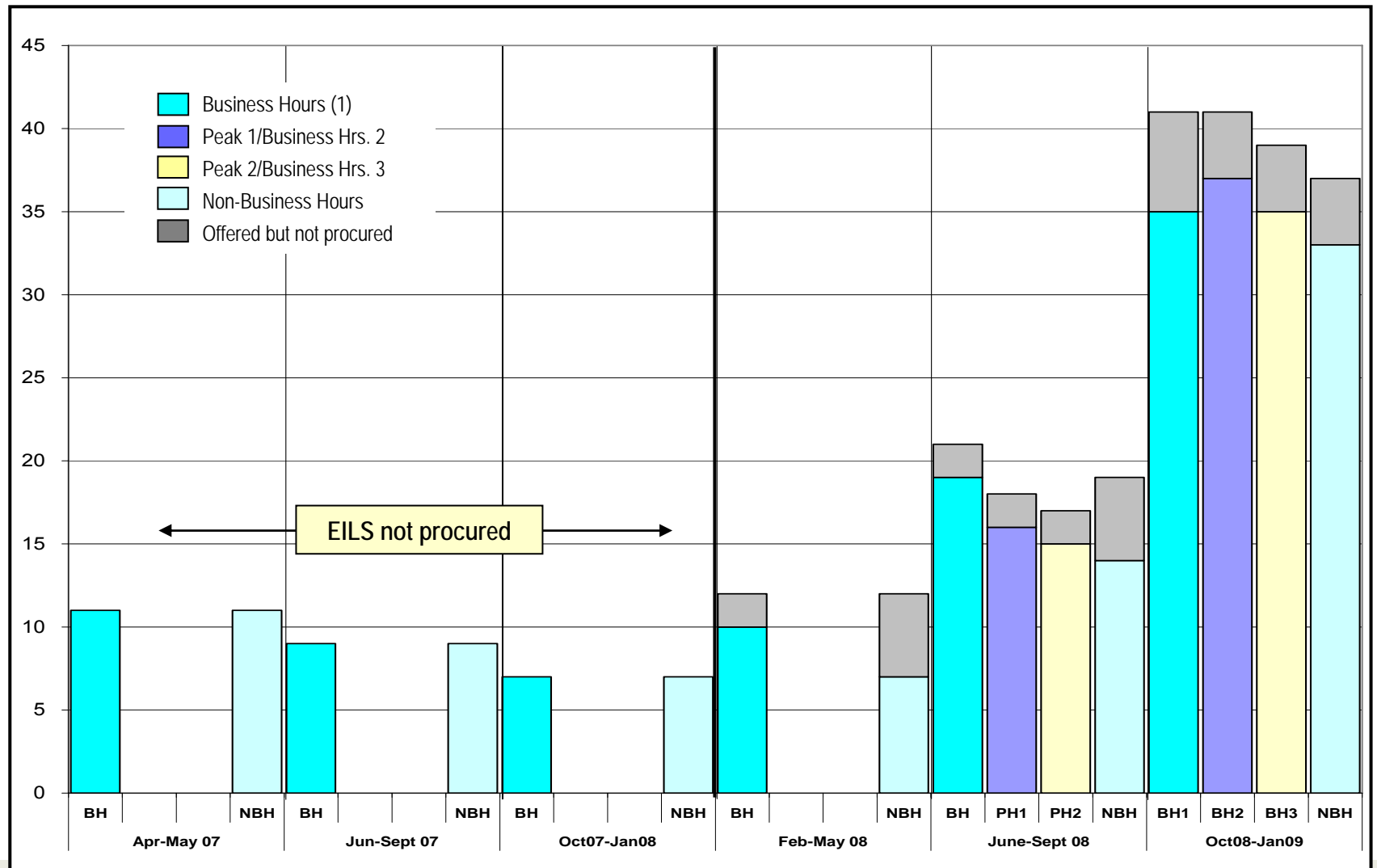
- Oct. '08 - Jan. '09 Contract Period**

Time Period	Business Hours 1	Business Hours 2	Business Hours 3	Non-Business Hours
Definition	8 AM to 1 PM Mon-Fri except Holidays	1 PM to 4 PM Mon-Fri except Holidays	4PM to 8 PM Mon-Fri except Holidays	All other hours
EILS Procured	272 MW	289 MW	291 MW	273 MW
# of EILS Resources	35 (includes 25 aggregations)	37 (includes 25 aggregations)	35 (includes 23 aggregations)	33 (includes 21 aggregations)
Avg. Cost per MW per Hour	\$10.83	\$11.28	\$11.39	\$9.61
RRS Avg. Cost MW/Hr. (October '08 only)	\$9.92	\$16.53	\$21.94	\$10.46

- Total projected cost for this Contract Period: \$8.2 million**
- Total projected cost for the 2008 EILS program year: \$20.1 million**

- **From the Preamble to the Rule amendments (Project 34706):**
 - ‘The commission also finds value in having resources that have not participated in demand response programs being enabled to do so by this program.’
 - ‘One of the goals of the commission in the restructured market has been developing additional demand-response resources.’
- **To date, LaaRs totaling 100 MW have participated in some of the EILS Time Periods**
- **Otherwise, EILS Resources to date have been entirely non-LaaR (new to the ERCOT markets)**
- **All participation in the current Contract Period is non-LaaR**

- No. of EILS Resources bidding by Contract Period**



- EILS MW by Contract Period**

