

Assessment of the Predictive Savings Tool



TXU
Electric Delivery

*Presented to
RESNET Conference 2007*

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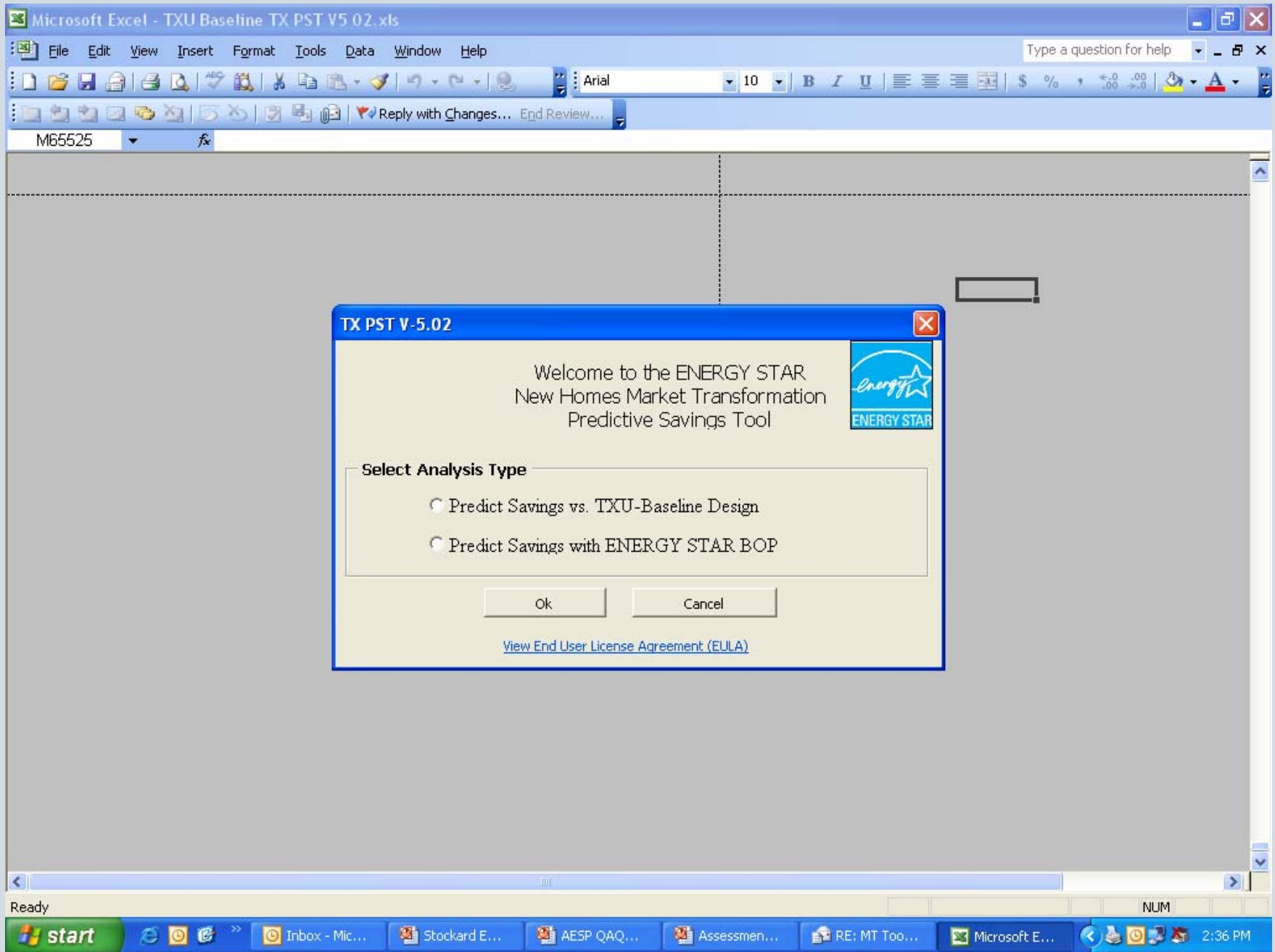
Outline

- Overview of Predictive Savings Tool
- Why Predictive Savings Tool Works
- Program Results

Overview of Predictive Savings Tool

- Savings methodologies - deemed, spreadsheet, modeling
- Deemed savings were based on 3 DOE-2 runs
- PST – Developed by ICF International to better capture savings
- Regression based on 300,000 home configurations, modeled in DOE-2
- # of stories, HERS Index, square footage and type of heating
- Baselines - HERS reference home and 2001 IECC

Analysis Selection Screen



Savings vs. TXU Baseline

Microsoft Excel - TXU Baseline TX PST V5 02.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

Arial 9

Reply with Changes... End Review...

L12 Gas Furnace with AC

**TXU**
Electric Delivery

Texas Predictive Savings Tool
Version-5.02

**ENERGY STAR**

ENERGY STAR New Homes Market Transformation Program

Savings versus TXU Baseline Home
Determine estimated savings of an ENERGY STAR Home compared to TXU baseline design

Select Analysis TypeSave and ExitExit without Saving

House Characteristics:

Nearest city:**Dallas/Fort Worth, TX**

ENERGY STAR HERS Index:**85**

No. of Stories:**2**

Total Conditioned Area:**2,526**

HVAC System Type:**Gas Furnace with AC**

Estimated Energy Savings:

Calculate

Demand kW
1.36

Electrical Energy kWh
1,099

Batch Processing:

Go to Batch Page

This feature allows you to analyze a large set of homes with a single push of a button. Please enter data in the correct format in the "Batch Template" and then select the "Calculate" button. Results are automatically shown on the "Output" report.

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Ready NUM

Predictive Savings Tool

Information required for my database

									kW-CERT	kWh-CERT
City	Home Address	ZIP	County	Story	sqft	HERS	CERT	Heat Type	00.00	00.00
Azle	600 Freedom	76020	Tarrant	1	1653	83	Yes	HP		
Azle	621 Austin	76020	Tarrant	1	1653	78	Yes	HP		
Burleson	320 Sumerset	76028	Johnson	1	2264	84	Yes	HP		
Crowley	273 Chestnut	76036	Tarrant	2	2462	81	Yes	HP		
Crowley	724 Denham	76036	Tarrant	1	2264	84	Yes	HP		
Fort Worth	212 Pecan	76108	Tarrant	1	1938	85	Yes	HP		
Fort Worth	216 Memory Elm	76108	Tarrant	2	2276	81	Yes	HP		
Fort Worth	4813 Grove View	76135	Tarrant	2	2276	81	Yes	HP		
Fort Worth	4820 Woodlands	76135	Tarrant	2	2276	81	Yes	HP		
Fort Worth	4832 Alexis	76135	Tarrant	2	2718	80	Yes	HP		
Fort Worth	9600 Pleasant	76108	Tarrant	1	1581	83	Yes	HP		
Kennedale	1222 Johnson	76060	Tarrant	2	3389	79	Yes	HP		

Batch Processing Screen for vs. TXU Design

Microsoft Excel - TXU_Baseline_TX_PST_V5.02(1).xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

1121 Gas Furnace with AC

Savings versus TXU-Baseline Design Batching Template

Please enter any information into the cells as shown by the demonstration entry for up to 3000 homes.

Calculate

Clear Contents

Back to Main Page

Go to Output Page

Optional Information			Required Information				
Home	ID	Builder	Location	No. Stories	Area	STAR HERS Index	HVAC System Type
Demo	DEMO-001	My Homes	Dallas/Fort Worth, TX	2	3,740	83.0	Gas Furnace with AC
103	HOU-93	ESH Test Runs	Dallas/Fort Worth, TX	1	1,100	85.0	Heat Pump
104	HOU-94	ESH Test Runs	Dallas/Fort Worth, TX	1	1,150	85.0	Heat Pump
105	HOU-95	ESH Test Runs	Dallas/Fort Worth, TX	1	1,200	85.0	Heat Pump
106	HOU-96	ESH Test Runs	Dallas/Fort Worth, TX	1	1,250	85.0	Heat Pump
107	HOU-97	ESH Test Runs	Dallas/Fort Worth, TX	1	1,300	85.0	Heat Pump
108	HOU-98	ESH Test Runs	Dallas/Fort Worth, TX	1	1,350	85.0	Heat Pump
109	HOU-91	ESH Test Runs	Dallas/Fort Worth, TX	1	1,000	85.0	Gas Furnace with AC
110	HOU-92	ESH Test Runs	Dallas/Fort Worth, TX	1	1,050	85.0	Gas Furnace with AC
111	HOU-93	ESH Test Runs	Dallas/Fort Worth, TX	1	1,100	85.0	Gas Furnace with AC
112	HOU-94	ESH Test Runs	Dallas/Fort Worth, TX	1	1,150	85.0	Gas Furnace with AC
113	HOU-95	ESH Test Runs	Dallas/Fort Worth, TX	1	1,200	85.0	Gas Furnace with AC
114	HOU-96	ESH Test Runs	Dallas/Fort Worth, TX	1	1,250	85.0	Gas Furnace with AC
115	HOU-97	ESH Test Runs	Dallas/Fort Worth, TX	1	1,300	85.0	Gas Furnace with AC
116	HOU-98	ESH Test Runs	Dallas/Fort Worth, TX	1	1,350	85.0	Gas Furnace with AC
117							
118							
119							
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122							
123							
124							
125							
126							

Ready

NUM

start

Inbox - Microso...

Stockard ESH Pr...

AESP QAQC Pro...

Assessment of ...

Microsoft Excel ...

2:46 PM

Deemed Savings Report

Microsoft Excel - TXU_Baseline_TX_PST_V5.02(1).xls									
File Edit View Insert Format Tools Data Window Help									
Type a question for help									
Arial 10 B I U									
A123 117									
 ENERGY STAR New Homes Market Transformation Program Deemed Savings Report (TXU Baseline) Print Preview Save To File Back to Main Page Go to Batch Page									
#	ID	Builder	Location	# of Stories	Area (sf)	HERS Index	HVAC System Type	Est. Savings	
								kW	kWh
100	HOU-100	ESH Test Runs	Dallas/Fort Worth, TX	2	1700	85.0	Gas Furnace with AC	1.02	843
101	HOU-91	ESH Test Runs	Dallas/Fort Worth, TX	1	1000	85.0	Heat Pump	0.77	1043
102	HOU-92	ESH Test Runs	Dallas/Fort Worth, TX	1	1050	85.0	Heat Pump	0.79	1079
103	HOU-93	ESH Test Runs	Dallas/Fort Worth, TX	1	1100	85.0	Heat Pump	0.81	1115
104	HOU-94	ESH Test Runs	Dallas/Fort Worth, TX	1	1150	85.0	Heat Pump	0.84	1152
105	HOU-95	ESH Test Runs	Dallas/Fort Worth, TX	1	1200	85.0	Heat Pump	0.86	1188
106	HOU-96	ESH Test Runs	Dallas/Fort Worth, TX	1	1250	85.0	Heat Pump	0.88	1224
107	HOU-97	ESH Test Runs	Dallas/Fort Worth, TX	1	1300	85.0	Heat Pump	0.91	1260
108	HOU-98	ESH Test Runs	Dallas/Fort Worth, TX	1	1350	85.0	Heat Pump	0.93	1296
109	HOU-91	ESH Test Runs	Dallas/Fort Worth, TX	1	1000	85.0	Gas Furnace with AC	0.75	600
110	HOU-92	ESH Test Runs	Dallas/Fort Worth, TX	1	1050	85.0	Gas Furnace with AC	0.77	620
111	HOU-93	ESH Test Runs	Dallas/Fort Worth, TX	1	1100	85.0	Gas Furnace with AC	0.79	641
112	HOU-94	ESH Test Runs	Dallas/Fort Worth, TX	1	1150	85.0	Gas Furnace with AC	0.81	662
113	HOU-95	ESH Test Runs	Dallas/Fort Worth, TX	1	1200	85.0	Gas Furnace with AC	0.84	683
114	HOU-96	ESH Test Runs	Dallas/Fort Worth, TX	1	1250	85.0	Gas Furnace with AC	0.86	703
115	HOU-97	ESH Test Runs	Dallas/Fort Worth, TX	1	1300	85.0	Gas Furnace with AC	0.88	724
116	HOU-98	ESH Test Runs	Dallas/Fort Worth, TX	1	1350	85.0	Gas Furnace with AC	0.91	745
TOTALS FOR REPORT:								271.25	298963
AVERAGE FOR REPORT:				1.4	4476	84.6		2.35	2585

Predictive Savings Tool

									kW-CERT kWh-CERT	
City	Home Address	ZIP	County	Story	sqft	HERS	CERT	Heat Type	38.41	30311.91
Azle	621 Austin	76020	Tarrant	1	1653	78	Yes	HP	2.62	2081.15
Burleson	320 Sumerset	76028	Johnson	1	2264	84	Yes	HP	2.68	2180.29
Crowley	273 Chestnut	76036	Tarrant	2	2462	81	Yes	HP	0.00	0.00
Crowley	724 Denham	76036	Tarrant	1	2264	84	Yes	HP	0.00	0.00
Fort Worth	212 Pecan	76108	Tarrant	1	1938	85	Yes	HP	1.76	1382.61
Fort Worth	216 Memory Elm	76108	Tarrant	2	2276	81	Yes	HP	2.27	1961.57
Fort Worth	4813 Grove View	76135	Tarrant	2	2276	81	Yes	HP	0.00	0.00
Fort Worth	4820 Woodlands	76135	Tarrant	2	2276	81	Yes	HP	1.80	1350.63
Fort Worth	4832 Alexis	76135	Tarrant	2	2718	80	Yes	HP	1.68	1284.93
Fort Worth	9600 Pleasant	76108	Tarrant	1	1581	83	Yes	HP	3.20	2593.28
Kennedale	1222 Johnson	76060	Tarrant	2	3389	79	Yes	HP	0.00	0.00

Measurement and Verification Audit by Summit Blue

2006 M&V audit

Savings Calculator Tool – Key asset for the success of the ESH program.

- Ease of use
- Streamlines the program
- Database support provided by ICF as issues or questions arise

Predictive Savings Tool

- One time up front cost
- Investment into the future
- Minimal fee for updating the tool when program requirements change

THE END