

# Home Energy Rating Certificate

## Final Report

Rating Date: 2020-06-08  
 Registry ID: 448281918  
 Ekotrope ID: bLbGDb6d

### HERS® Index Score:

# 50

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit [www.hersindex.com](http://www.hersindex.com)

### Annual Savings

# \$1,282

\*Relative to an average U.S. home

**Home:**  
 705 East 10th 1/2  
 Houston, TX 77008

**Builder:**  
 HDT

### Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	4.6	\$107
Cooling	9.4	\$220
Hot Water	5.9	\$30
Lights/Appliances	26.5	\$621
Service Charges		\$120
Generation (e.g. Solar)	0.0	\$0
<b>Total:</b>	<b>46.4</b>	<b>\$1,098</b>

### This home meets or exceeds the criteria of the following:

2018 International Energy Conservation Code  
 2015 International Energy Conservation Code  
 2012 International Energy Conservation Code  
 2009 International Energy Conservation Code  
 2006 International Energy Conservation Code

### Rating Completed by:

**Energy Rater:** Francis Wagner  
 RESNET ID: 7356719

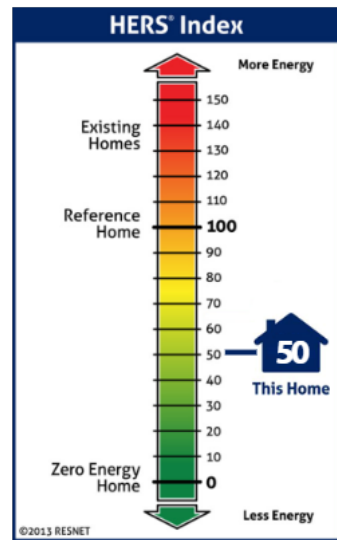
**Rating Company:** TONER Home Matters  
 5438 Guhn Rd  
 281-687-6801

**Rating Provider:** Americas Home Energy Rating Org  
 936-462-7635



*Francis Wagner*

Francis Wagner, Certified Energy Rater  
 Digitally signed: 7/20/20 at 7:49 AM



### Home Feature Summary:

Home Type:	Single family detached
Model:	3986
Community:	N/A
Conditioned Floor Area:	3,986 ft <sup>2</sup>
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 9 HSPF
Primary Cooling System:	Air Conditioner • Electric • 16 SEER
Primary Water Heating:	Water Heater • Natural Gas • 0.98 Energy Factor
House Tightness:	1904 CFM50 (3.02 ACH50)
Ventilation:	205 CFM • 68 Watts
Duct Leakage to Outside:	Untested
Above Grade Walls:	R-21
Ceiling:	Attic, R-21
Window Type:	U-Value: 0.37, SHGC: 0.23
Foundation Walls:	N/A

# 705 East 10th 1/2, Houston, TX

**HERS® Index Score:**  
**50**

Rating Date: Jun 8, 2020

HERS Registry ID: 7356719

**Annual Estimates:**

Electric (kWh): 11,851.1  
Natural Gas (Therms): 59.4  
CO2 (Tons): 9.0  
Approx. Energy Cost: \$1,098

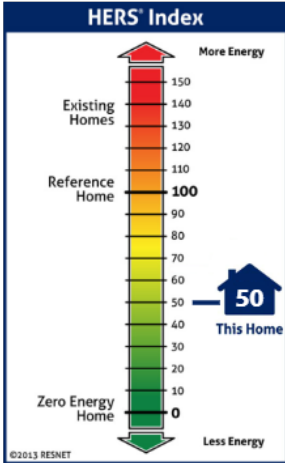
**Rating Company:**

TONER Home Matters

**Rating Provider:**

Americas Home Energy Rating  
Org

**Rating Provider Address:**



**Home Feature Summary:**

Single family detached, 3 bedrooms, 3,986 ft<sup>2</sup>

Heating: 9 HSPF

Cooling: 16 SEER

Hot Water: 0.98 Energy Factor

Air Leakage:

1904 CFM50 (3.02 ACH50)

Ventilation: 205 CFM • 68 W

Duct LTO: Untested

Above Grade Walls: R-21

Ceiling: Attic, R-21

Window: U: 0.37 • SHGC: 0.23

Foundation Walls: N/A



Ekotrope RATER - Version:  
3.1.1.2487

This report does not constitute any warranty or guarantee.

# Texas 2018 RESNET Registered Energy Rating Index Report

## Property

Builder:HDT  
Address:  
705 East 10th 1/2, Houston, TX 77008

## Organization

Company:TONER Home Matters  
Phone:  
Rater:Francis Wagner

## Energy Rating Index Information

RESNET Registered Rating  
Rating No:448281918  
Rater ID (RTIN):7356719  
Date Rated:2020-06-08

Estimated Annual Energy Consumption*		
	Rated Home Calculated Energy Use (MBtu)	Rated Home Cost (\$/yr)
Heating	4.6	\$107
Cooling	9.4	\$220
Water Heating	5.9	\$30
Lights & Appliances	26.5	\$621
Photovoltaics	0.0	\$0
<b>Total</b>	<b>46.4</b>	<b>\$1,098</b>

\*Based on standard operating conditions

ERI with PV:53

ERI without PV:53

Annual Estimates	
Electric (kWh):11,851.1 Natural Gas (Therms):59.4	CO2 Emissions (Tons):9.0

Maximum Energy Rating Index:65	This Home's Energy Rating Index:53	PASS
This home MEETS the Energy Rating Index Score requirement of Texas 2018 for Climate Zone 2. It MEETS all of the requirements verified by Ekotrope. Mandatory requirements are summarized on the 2nd page of this report, some of which are not verified by Ekotrope.		
Name: Francis Wagner	Signature: <u>Francis Wagner</u>	
Organization: TONER Home Matters	Digitally signed: 7/20/20 at 7:49 AM	

Rating Provider Data and Seal
Company:Americas Home Energy Rating Org Address: Phone #:936-462-7635 Fax #:

To determine if a provider is properly accredited go to: <a href="http://www.resnet.us/professional/programs/search_directory">www.resnet.us/professional/programs/search_directory</a>

(Confirmed and tested)

Climate Zone 2		Mandatory Requirements
Provision Number	Topic	Compliance Decision
Texas 2009 IECC Table 402.1.1 or 402.1.3	Building thermal envelope minimum insulation levels and maximum fenestration U-factor and SHGC	PASS
R401.3	Post a permanent certificate listing the level of efficiencies installed in the house	Certificate required for CO
R402.4.1.2	Envelope air leakage maximum leakage rate	PASS
R402.4.1 / Table R402.4.1.1	Comply with air sealing and insulation requirements in Table R402.4.1.1	Checklist required for CO
R402.4.4	Rooms containing fuel-burning appliances	PASS*
R402.5	Maximum fenestration U-factor and SHGC	(U-Factor) PASS (SHGC) PASS
R403.1.2	Heat pump controls	PASS*
R406.2	Ducts outside of conditioned space to be insulated to a minimum of R-6.	PASS*
R403.3.2	Duct sealing on all ducts	PASS*
R403.3.3	Duct testing for ducts in unconditioned space	PASS*
R403.3.5	Building cavities not used as ducts.	PASS*
R403.5.1	Heated water circulation and temperature maintenance systems comply	PASS*
R403.5.3	Hot water pipe insulated to R-3	PASS
R403.6	Mechanical ventilation meeting the requirements of the IRC or IMC. Outdoor air and exhaust dampers installed	PASS*
R403.7	ACCA Manual J and S conducted for all heating and cooling systems.	ACCA forms required for permit
R403.8	Systems serving multiple dwelling units to meet the mechanical requirements of IECC commercial code	PASS*
R403.9	Snow melt and ice system controls installed where applicable	PASS*
R403.10	Pools and permanent spa energy consumption meet requirements for heaters, time clocks and covers	PASS*
R403.11	Portable spas meet the requirements of APSP-14.	PASS*
R404.1	High efficacy lights installed in 75% of permanently installed fixtures.	PASS

\* These items have been field-verified by the Rater, Field Inspector, Code Inspector, or Builder.

# IECC 2018 Performance Compliance

## Property

705 East 10th 1/2  
Houston, TX 77008  
Model: 3986

Speculative Residence  
705 E 10th 1/2 St plan 3986

## Organization

TONER Home Matters  
Francis Wagner

## Builder

HDT

## Inspection Status

2020-06-08  
Rater ID (RTIN): 7356719  
RESNET Registered  
(Confirmed)

## Annual Energy Cost

Design	IECC 2018 Performance	As Designed
Heating	\$312	\$228
Cooling	\$593	\$539
Water Heating	\$160	\$160
Mechanical Ventilation	\$49	\$32
<b>SubTotal - Used to determine compliance</b>	<b>\$1,114</b>	<b>\$959</b>
Lights & Appliances w/out Ventilation	\$840	\$840
Onsite generation	\$0	\$0
<b>Total</b>	<b>\$1,954</b>	<b>\$1,799</b>

## Requirements

✓	405.3	Performance-based compliance passes by 13.9%
✓	R402.4.1.2	Air Leakage Testing Air sealing is 3.02 ACH at 50 Pa. It must not exceed 5.00 ACH at 50 Pa.
✓	R402.5	Area-weighted average fenestration SHGC
✓	R402.5	Area-weighted average fenestration U-Factor
✓	R404.1	Lighting Equipment Efficiency
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.
✓	IRC M1505.4.3	Mechanical Ventilation Rate
✓	R403.6.1	Mechanical Ventilation Efficacy
✓	R405.2	Duct Insulation

## Design exceeds requirements for IECC 2018 Performance compliance by 13.9%.

As a 3rd party extension of the code jurisdiction utilizing these reports, I certify that this energy code compliance document has been created in accordance with the requirements of Chapter 4 of the adopted International Energy Conservation Code based on Climate Zone 2. If rating is Projected, I certify that the building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. If rating is Confirmed, I certify that the address referenced above has been inspected/tested and that the mandatory provisions of the IECC have been installed to meet or exceed the intent of the IECC or will be verified as such by another party.

Name: Francis Wagner

Signature: Francis Wagner

Organization: TONER Home Matters

Digitally signed: 7/20/20 at 7:49 AM

### Ekotrope RATER - Version 3.1.1.2487

IECC 2018 Performance compliance results calculated using Ekotrope RATER's energy and code compliance algorithm.  
Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users.  
Ekotrope disclaims all liability for the information shown on this report.