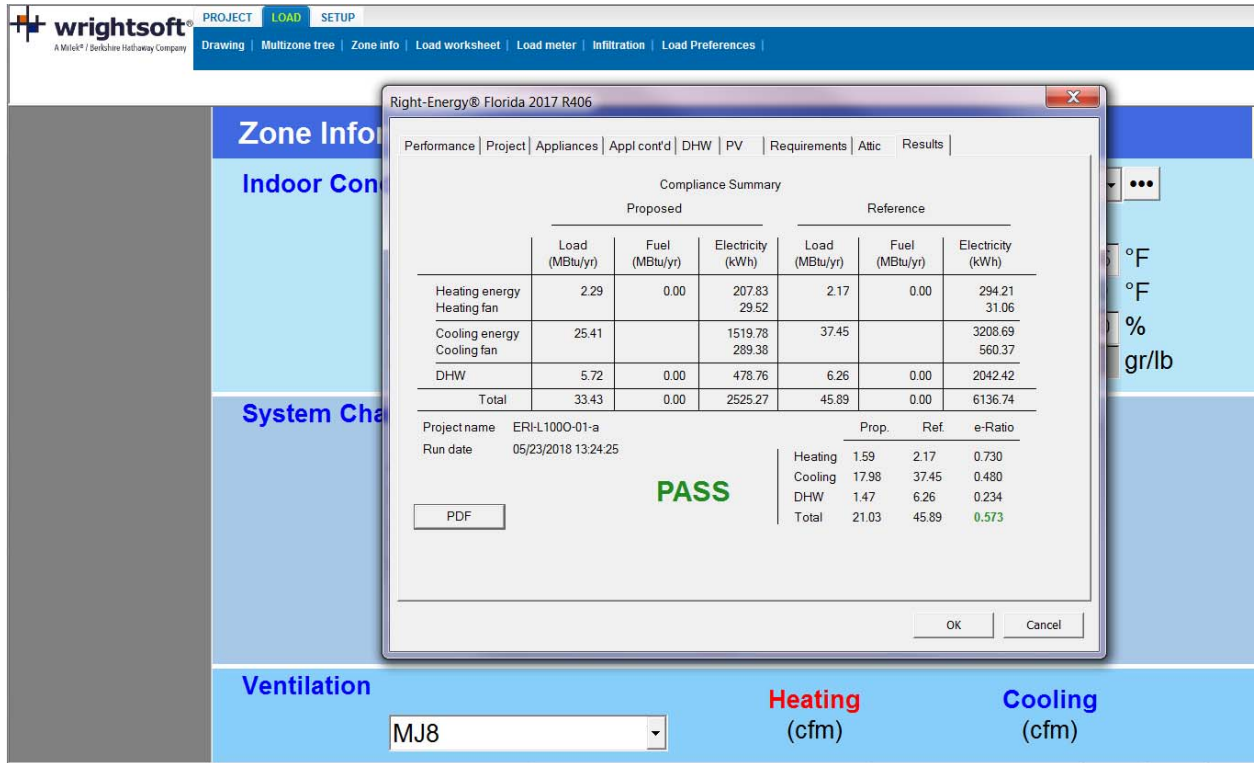


Comments on Wrightsoft R406 software

Wrightsoft seems to calculate ERI as a field labeled as e-ratio. It appears to be an e-ratio of just heating cooling and water heating. There should also be appliances and lighting. I see nowhere what the lighting and appliance energy use is. Can't verify any outputs on spreadsheets without that.

I also notice that the R406 screen does not offer the mechanical ventilation tab indicated in the instruction manual.

Florida 406 - ERI-L1000-01



Multiple issues with the reference home report generated:

1. Heating system has HSPF of 8.5 instead of 7.7
2. Cooling system has SEER 16.0 instead of SEER 13.0
3. Air Source Heat Pump (EF 3.2) selected for hot water system for 50 gallon system? Standard 301 formula yields an EF of 0.904
4. Ducts percent leakage 6.00 and Qn of 0? Standard 301 calls for DSE of 0.80
5. Temperature should be 68 and 78 for ERI method, not 72 and 75
6. Should not have programmable thermostat
7. There may be others

If this is the reference home they use, then they are not correct. If it isn't the reference home they use then how does one get the data needed to verify their test results?

HEATING SYSTEM						
#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
1	Split air source heat pump		HSPF: 8.5	24.0 kBtu/hr	1	sys#1

COOLING SYSTEM								
#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts

1	Split air source heat pump				SEER: 16.0	24.0 kBtu/hr	258 cfm	0.70	1	sys#1														
<b>HOT WATER SYSTEM</b>																								
#	System Type	Subtype	Location	EF	(		SetPnt	Conservation																
1	Air source heat pump			3.20	50 gal	60 gal	125 °F	None																
<b>DUCTS</b>																								
#	----- Supply Location	R-Value	----- Area	----- Return Location	----- Area	Leakage Type	Air Handler	CFM 25 Out	Percent Leakage	QN	RLF	HVAC# Heat	Cool											
1	Entire House	6.0	385 ft²	Entire House	77 ft²	Proposed Qn	Entire House	0.0 cfm	6.00	0.00	0.00	1	1											
<b>TEMPERATURES</b>																								
Programmable Thermostat: Y							Ceiling Fans:																	
Cooling	[ X ]	Jan	[ X ]	Feb	[ X ]	Mar	[ X ]	Apr	[ X ]	May	[ X ]	Jun	[ X ]	Jul	[ X ]	Aug	[ X ]	Sep	[ X ]	Oct	[ X ]	Nov	[ X ]	Dec
Heating	[ X ]	Jan	[ X ]	Feb	[ X ]	Mar	[ X ]	Apr	[ X ]	May	[ X ]	Jun	[ X ]	Jul	[ X ]	Aug	[ X ]	Sep	[ X ]	Oct	[ X ]	Nov	[ X ]	Dec
Venting	[ X ]	Jan	[ X ]	Feb	[ X ]	Mar	[ X ]	Apr	[ X ]	May	[ X ]	Jun	[ X ]	Jul	[ X ]	Aug	[ X ]	Sep	[ X ]	Oct	[ X ]	Nov	[ X ]	Dec
Thermostat Schedule:		Florida Building Code, 6th Edition										Hours												
Schedule Type		(2017)	1	2	3	4	5	6	7	8	9	10	11	12										
Cooling (WD)		AM	75	75	75	75	75	75	75	75	75	75	75	75										
		PM	75	75	75	75	75	75	75	75	75	75	75											
Cooling (WEH)		AM	75	75	75	75	75	75	75	75	75	75	75											
		PM	75	75	75	75	75	75	75	75	75	75	75											
Heating (WD)		AM	72	72	72	72	72	72	72	72	72	72	72											
		PM	72	72	72	72	72	72	72	72	72	72	72											
Heating (WEH)		AM	72	72	72	72	72	72	72	72	72	72	72											
		PM	72	72	72	72	72	72	72	72	72	72	72											

It appears that Wrightsoft may not be including appliance energy use. I see no output for appliances in the rated or reference homes. There is no output on the ERI pie chart for lighting and appliances.

There appears to be no way to do a HERS auto Gen test in the software provided for sites outside of Florida. The software vendor is to provide that ability for verifying test results. When I try to run Autogen test #4 it won't let me as it is a location outside of Florida. Yet there are results in the spreadsheet. How does one reproduce and verify those results?

Without a way to reproduce the results we did no further testing.