

# FLORIDA ENERGY CODE COMPLIANCE FOR COMMERCIAL BUILDINGS

5<sup>th</sup> ed. 2014

## Compliance options

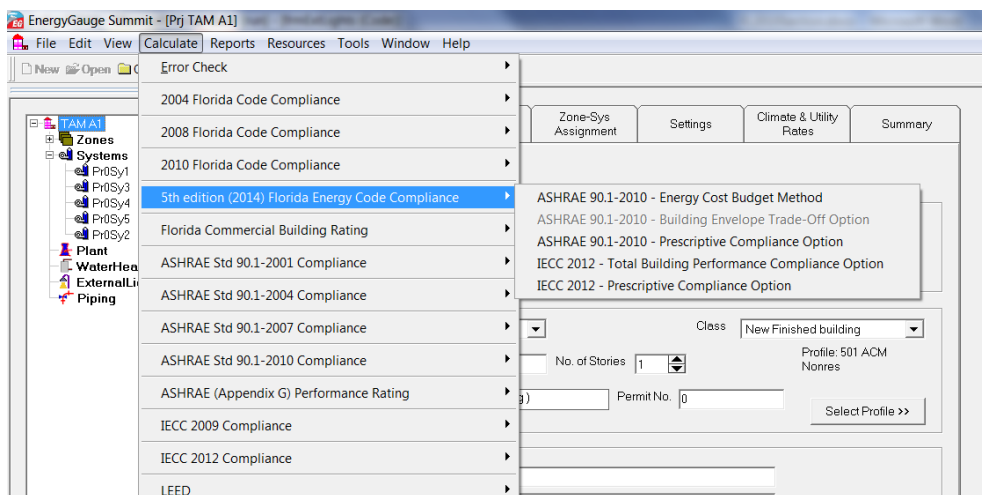
The three compliance procedures for the FLORIDA ENERGY CODE COMPLIANCE FOR COMMERCIAL BUILDINGS are:

### Commercial Energy Efficiency Code Compliance

- FEC Prescriptive Method
- FEC Total Building Performance Method
- ASHRAE Prescriptive Method
- ASHRAE Energy Cost Budget Method

These can be invoked by going to the appropriate items in the calculate menu as follows:

Calculate -> **5<sup>th</sup> Edition (2014) Florida Energy Code**



## Steps for compliance:

- 1) Open new file and enter data. The main user manual explains all the screens, input procedures and input details.
- 2) After entering inputs go to Calculate → Error Check. Correct errors that are found
- 3) Run the appropriate compliance Calculate -> **5<sup>th</sup> Edition (2014) Florida Energy Code** → Total Building Performance Compliance or other options
- 4) Check the reports generated to see if the building complies.
- 5) Print the reports and look for elements that have failed. The reasons for failing will be given in the reports
- 6) Make changes to inputs that have failed and re run the calculations until you are able to comply.

**EnergyGauge Summit® v5.10**  
**INPUT DATA REPORT**

**Project Information**

<b>Project Name:</b> TAM A1	<b>Orientation:</b> North
<b>Project Title:</b> TAM Prototype Building A1	<b>Building Type:</b> Office
<b>Address:</b> Enter Address here Enter Address here	<b>Building Classification:</b> New Finished building
<b>State:</b> FL	<b>No. of Stories:</b> 1
<b>Zip:</b> 0	<b>GrossArea:</b> 22500      SF
<b>Owner:</b> Florida Solar Energy Center	

**Zones**

No	Acronym	Description	Type	Area [sf]	Multiplier	Total Area [sf]	<input type="checkbox"/>
1	Interior	Interior Zone	CONDITIONED	14400.0	1	14400.0	<input type="checkbox"/>
2	Perimeter A	Zone 3	CONDITIONED	2025.0	1	2025.0	<input type="checkbox"/>
3	Perimeter B	Zone 3	CONDITIONED	2025.0	1	2025.0	<input type="checkbox"/>
4	Perimeter C	Zone 3	CONDITIONED	2025.0	1	2025.0	<input type="checkbox"/>
5	Perimeter D	Zone 3	CONDITIONED	2025.0	1	2025.0	<input type="checkbox"/>

Spaces										
No	Acronym	Description	Type	Depth [ft]	Width [ft]	Height [ft]	Multiplier	Total Area [sf]	Total Volume [cf]	
<b>In Zone: Interior</b>										
1	Pr0Zo2Sp1	Zo0Sp1	Office - Open Plan	120.00	120.00	12.00	1	14400.0	172800.0	<input type="checkbox"/>
<b>In Zone: Perimeter A</b>										
1	Pr0Zo3Sp1	Zo0Sp1	Office - Open Plan	15.00	135.00	12.00	1	2025.0	24300.0	<input type="checkbox"/>
<b>In Zone: Perimeter B</b>										
1	Pr0Zo3Sp1	Zo0Sp1	Office - Open Plan	15.00	135.00	12.00	1	2025.0	24300.0	<input type="checkbox"/>
<b>In Zone: Perimeter C</b>										
1	Pr0Zo3Sp1	Zo0Sp1	Office - Open Plan	15.00	135.00	12.00	1	2025.0	24300.0	<input type="checkbox"/>
<b>In Zone: Perimeter D</b>										
1	Pr0Zo3Sp1	Zo0Sp1	Office - Open Plan	15.00	135.00	12.00	1	2025.0	24300.0	<input type="checkbox"/>

Lighting										
No	Type	Category	No. of Luminaires	Watts per Luminaire	Power [W]	Control Type	No. of Ctrl pts			
<b>In Zone: Interior</b>										
<b>In Space: Pr0Zo2Sp1</b>										
1	Compact Fluorescent	General Lighting	1	10800	10800	Daylighting with continuous	2	<input type="checkbox"/>		
<b>In Zone: Perimeter A</b>										
<b>In Space: Pr0Zo3Sp1</b>										
1	Compact Fluorescent	General Lighting	1	1519	1519	Daylighting with continuous	1	<input type="checkbox"/>		
<b>In Zone: Perimeter B</b>										
<b>In Space: Pr0Zo3Sp1</b>										
1	Compact Fluorescent	General Lighting	1	1519	1519	Daylighting with continuous	1	<input type="checkbox"/>		
<b>In Zone: Perimeter C</b>										
<b>In Space: Pr0Zo3Sp1</b>										
1	Compact Fluorescent	General Lighting	1	1519	1519	Daylighting with continuous	1	<input type="checkbox"/>		
<b>In Zone: Perimeter D</b>										

<b>In Space:</b> Pr0Zo3Sp1	1	Compact Fluorescent	General Lighting	1	1519	1519	Daylighting with continuous	1	<input type="checkbox"/>
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<b>Walls</b>												
No	Description	Type	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Direction	Conductance [Btu/hr. sf. F]	Heat Capacity [Btu/sf.F]	Dens. [lb/cf]	R-Value [h.sf.F/Btu]	<input type="checkbox"/>
<b>In Zone: Perimeter A</b>												
1	Pr0Zo3Wa1	Partition Wall	120.00	12.00	1	1440.0	South	1.1100			0.9	<input type="checkbox"/>
2	Pr0Zo3Wa2	External Wall	150.00	12.00	1	1800.0	North	0.0500	3.940	26.10	20.0	<input type="checkbox"/>
<b>In Zone: Perimeter B</b>												
1	Pr0Zo5Wa1	Partition Wall	120.00	12.00	1	1440.0	East	1.1100			0.9	<input type="checkbox"/>
2	Pr0Zo5Wa2	External Wall	150.00	12.00	1	1800.0	West	0.0500	3.940	26.10	20.0	<input type="checkbox"/>
3	Pr0Zo5Wa3	Partition Wall	21.20	12.00	1	254.4	NorthEast	1.1100			0.9	<input type="checkbox"/>
<b>In Zone: Perimeter C</b>												
1	Pr0Zo6Wa1	External Wall	150.00	12.00	1	1800.0	South	0.0500	3.940	26.10	20.0	<input type="checkbox"/>
2	Pr0Zo6Wa2	Partition Wall	120.00	12.00	1	1440.0	North	1.1100			0.9	<input type="checkbox"/>
3	Pr0Zo6Wa3	Partition Wall	21.20	12.00	1	254.4	NorthWes t	1.1100			0.9	<input type="checkbox"/>
<b>In Zone: Perimeter D</b>												
1	Pr0Zo7Wa1	External Wall	150.00	12.00	1	1800.0	East	0.0500	3.940	26.10	20.0	<input type="checkbox"/>
2	Pr0Zo7Wa2	Partition Wall	120.00	12.00	1	1440.0	West	1.1100			0.9	<input type="checkbox"/>
3	Pr0Zo7Wa3	Partition Wall	21.20	12.00	1	254.4	SouthWes t	1.1100			0.9	<input type="checkbox"/>
4	Pr0Zo7Wa4	Partition Wall	21.20	12.00	1	254.4	NorthWes t	1.1100			0.9	<input type="checkbox"/>

<b>Windows</b>											
No	Description	Type	Shaded	U [Btu/hr sf F]	SHGC	Vis.Tra	W [ft]	H (Effec) [ft]	Multi plier	Total Area [sf]	<input type="checkbox"/>
<b>In Zone: Perimeter A</b>											
<b>In Wall: Pr0Zo3Wa2</b>											
1	Pr0Zo3Wa2Wi1	User Defined	No	0.9000	0.19	0.64	10.00	5.50	10	550.0	<input type="checkbox"/>

<b>In Zone:</b>	<b>Perimeter B</b>												
<b>In Wall:</b>	<b>Pr0Zo5Wa2</b>												
	1 Pr0Zo5Wa2Wi1	User Defined	No	0.9000	0.19	0.64	10.00	5.50	10	550.0			<input type="checkbox"/>
<b>In Zone:</b>	<b>Perimeter C</b>												
<b>In Wall:</b>	<b>Pr0Zo6Wa1</b>												
	1 Pr0Zo6Wa1Wi1	User Defined	No	0.9000	0.19	0.64	10.00	5.50	10	550.0			<input type="checkbox"/>
<b>In Zone:</b>	<b>Perimeter D</b>												
<b>In Wall:</b>	<b>Pr0Zo7Wa1</b>												
	1 Pr0Zo7Wa1Wi1	User Defined	No	0.9000	0.19	0.64	10.00	5.50	10	550.0			<input type="checkbox"/>

### Doors

No	Description	Type	Shaded?	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Cond. [Btu/hr. sf. F]	Dens. [lb/cf]	Heat Cap. [Btu/sf. F]	R-Value [h.sf.F/Btu]	
<b>In Zone:</b>												
<b>In Wall:</b>												<input type="checkbox"/>

### Roofs

No	Description	Type	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Tilt [deg]	Cond. [Btu/hr. Sf. F]	Heat Cap [Btu/sf. F]	Dens. [lb/cf]	R-Value [h.sf.F/Btu]	
<b>In Zone:</b>	<b>Interior</b>											
1	Pr0Zo2Rf1	Roof	120.00	120.00	1	14400.0	0.00	0.0600			16.7	<input type="checkbox"/>
<b>In Zone:</b>	<b>Perimeter A</b>											
1	Pr0Zo3Rf1	Roof	150.00	13.50	1	2025.0	0.00	0.0600			16.7	<input type="checkbox"/>
<b>In Zone:</b>	<b>Perimeter B</b>											
1	Pr0Zo5Rf1	Roof	150.00	13.50	1	2025.0	0.00	0.0600			16.7	<input type="checkbox"/>
<b>In Zone:</b>	<b>Perimeter C</b>											
1	Pr0Zo6Rf1	Roof	150.00	13.50	1	2025.0	0.00	0.0600			16.7	<input type="checkbox"/>
<b>In Zone:</b>	<b>Perimeter D</b>											
1	Pr0Zo7Rf1	Roof	150.00	13.50	1	2025.0	0.00	0.0600			16.7	<input type="checkbox"/>

### Skylights

No	Description	Type	U [Btu/hr sf F]	SHGC	Vis.Trans	W [ft]	H (Effec) [ft]	Multiplier	Area [Sf]	Total Area [Sf]	<input type="checkbox"/>
<b>In Zone: Interior</b>											
<b>In Roof: Pr0Zo2Rf1</b>											
1	Pr0Zo2Rf1Sk2	User Defined	1.00	0.25	0.76	33.54	33.54	2	1124.9	2249.9	<input type="checkbox"/>

### Floors

No	Description	Type	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Cond. [Btu/hr. sf. F]	Heat Cap. [Btu/sf. F]	Dens. [lb/cf]	R-Value [h.sf.F/Btu]	<input type="checkbox"/>
<b>In Zone: Interior</b>											
1	Pr0Zo2F11	Floor	120.00	120.00	1	14400.0	9.0800	9.33	140.00	0.11	<input type="checkbox"/>
<b>In Zone: Perimeter A</b>											
1	Pr0Zo3F11	Floor	150.00	13.50	1	2025.0	9.0800	9.33	140.00	0.11	<input type="checkbox"/>
<b>In Zone: Perimeter B</b>											
1	Pr0Zo5F11	Floor	150.00	13.50	1	2025.0	9.0800	9.33	140.00	0.11	<input type="checkbox"/>
<b>In Zone: Perimeter C</b>											
1	Pr0Zo6F11	Floor	150.00	13.50	1	2025.0	9.0800	9.33	140.00	0.11	<input type="checkbox"/>
<b>In Zone: Perimeter D</b>											
1	Pr0Zo7F11	Floor	150.00	13.50	1	2025.0	9.0800	9.33	140.00	0.11	<input type="checkbox"/>

### Systems

<b>Pr0Sy1</b>	<b>System 1</b>	<b>Constant Volume Packaged System--902</b>	<b>No. Of Units 1</b>		
Component	Category	Capacity	Efficiency	IPLV	<input type="checkbox"/>
1	Cooling System	930326.00	12.80	12.90	<input type="checkbox"/>
2	Heating System	1712720.00	1.00		<input type="checkbox"/>
3	Air Handling System -Supply	31717.00	0.80		<input type="checkbox"/>

Pr0Sy3		System 1	Constant Volume Packaged System--902		No. Of Units 1
Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	144292.00	12.80	12.90	<input type="checkbox"/>
2	Heating System	270450.00	1.00		<input type="checkbox"/>
3	Air Handling System -Supply	5008.00	0.80		<input type="checkbox"/>
Pr0Sy4		System 1	Constant Volume Packaged System--902		No. Of Units 1
Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	146944.00	12.80	12.90	<input type="checkbox"/>
2	Heating System	271640.00	1.00		<input type="checkbox"/>
3	Air Handling System -Supply	5030.00	0.80		<input type="checkbox"/>
Pr0Sy5		System 1	Constant Volume Packaged System--902		No. Of Units 1
Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	142287.00	12.80	12.90	<input type="checkbox"/>
2	Heating System	261750.00	1.00		<input type="checkbox"/>
3	Air Handling System -Supply	4847.00	0.80		<input type="checkbox"/>
Pr0Sy2		System 1	Constant Volume Packaged System--902		No. Of Units 1
Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	130748.00	12.80	12.90	<input type="checkbox"/>
2	Heating System	241140.00	1.00		<input type="checkbox"/>
3	Air Handling System -Supply	4465.00	0.80		<input type="checkbox"/>

Plant						
Equipment	Category	Size	Inst.No	Eff.	IPLV	
						<input type="checkbox"/>

### Water Heaters

W-Heater Description	Capacity Cap.Unit	I/P Rt.	Efficiency	Loss	<input type="checkbox"/>
1 Electric water heater	80 [Gal]	11 [kW]	0.8900 [Ef]	290.0000 [Btu/h]	<input type="checkbox"/>

### Ext-Lighting

Description	Category	No. of Luminaires	Watts per Luminaire	Area/Len/No. of units [sf/ft/No]	Control Type	Wattage [W]	<input type="checkbox"/>
1 Ext Light 2	Walk way less than 10 feet wide	1	846	150.00	Photo Sensor control	846.00	<input type="checkbox"/>

### Piping

No	Type	Operating Temperature [F]	Insulation Conductivity [ Btu-in/h.sf.F]	Nomonal pipe Diameter [in]	Insulation Thickness [in]	Is Runout?	<input type="checkbox"/>

### Fenestration Used

Name	Glass Type	No. of Panels	Glass Conductance [Btu/h.sf.F]	SHGC	VLT	<input type="checkbox"/>
Skylight	User Defined	1	1.0000	0.2500	0.7600	<input type="checkbox"/>
Windows	User Defined	1	0.9000	0.1900	0.6400	<input type="checkbox"/>



## Materials Used

Mat No	Acronym	Description	Only R-Value Used	RValue [h.sf.F/Btu]	Thickness [ft]	Conductivity [Btu/h.ft.F]	Density [lb/cf]	SpecificHeat [Btu/lb.F]	<input type="checkbox"/>

## Constructs Used

No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	<input type="checkbox"/>	
1060	Floor	Yes	No	9.08	9.33	140.00	0.1	<input type="checkbox"/>	

No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	<input type="checkbox"/>	
1061	Partition Wall	Yes	Yes	1.11			0.9	<input type="checkbox"/>	

No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	<input type="checkbox"/>	
1065	External Wall	Yes	No	0.05	3.94	26.10	20.0	<input type="checkbox"/>	

No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	
1067	Roof	Yes	Yes	0.06			16.7	<input type="checkbox"/>
								<input type="checkbox"/>

# Florida Building Code, Fifth Edition (2014) - Energy Conservation

EnergyGauge Summit® Fla/Com-2015, Effective Date: June 30, 2015 -- Form 506-2014  
ASHRAE 90.1-2010 - Energy Cost Budget Option

## Check List

Applications for compliance with the Florida Building Code, Energy Conservation shall include:

- This Checklist
- An Input report generated from the software just after completing compliance calculations without any further changes
- The full compliance report generated by the software that contains the project summary, compliance summary, certifications and detailed component compliance reports
- Boxes appropriately checked in the Miscellaneous report generated by the software at the end of the compliance report

## PROJECT SUMMARY

**Short Desc:** TAM A1

**Description:** TAM Prototype Building A1

**Owner:** Florida Solar Energy Center

**Address1:** Enter Address here

**City:** Cocoa

**Address2:** Enter Address here

**State:** FL

**Zip:** 0

**Type:** Office

**Class:** New Finished building

**Jurisdiction:** MIAMI, MIAMI-DADE COUNTY, FL (232400)

**Conditioned Area:** 22500 SF

**Conditioned & UnConditioned Area:** 22500 SF

**No of Stories:** 1

**Area entered from Plans** 22500 SF

**Permit No:** 0

**Max Tonnage** 77.5

**If different, write in:** \_\_\_\_\_

## Compliance Summary

Component	Design	Criteria	Result
Gross Energy Cost (in \$)	29,207.0	20,279.0	<b>FAILED</b>
LIGHTING CONTROLS			<b>PASSES</b>
EXTERNAL LIGHTING			<b>FAILS</b>
HVAC SYSTEM			<b>PASSES</b>
PLANT			<b>No Entry</b>
WATER HEATING SYSTEMS			<b>PASSES</b>
PIPING SYSTEMS			<b>No Entry</b>
Met all required compliance from Check List?			<b>Yes/No/NA</b>

### IMPORTANT MESSAGE

Info 5009 -- -- -- An input report of this design building must be submitted along with this Compliance Report

## CERTIFICATIONS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code

Prepared By: \_\_\_\_\_

Building Official: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

I certify that this building is in compliance with the FLorida Energy Efficiency Code

Owner Agent: \_\_\_\_\_

Date: \_\_\_\_\_

If Required by Florida law, I hereby certify (\*) that the system design is in compliance with the Florida Energy Efficiency Code

Architect: \_\_\_\_\_

Reg No: \_\_\_\_\_

Electrical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Lighting Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Mechanical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Plumbing Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

(\*) Signature is required where Florida Law requires design to be performed by registered design professionals. Typed names and registration numbers may be used where all relevant information is contained on signed/sealed plans.

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**Building End Uses**

	1) Proposed	2) Baseline
<b>Total</b>	<i>1,852.80</i>	<i>1,300.90</i>
	<i>\$29,207</i>	<i>\$20,279</i>
ELECTRICITY(MBtu/kWh/\$)	1,852.80	1,300.90
	542878	381187
	<i>\$29,207</i>	<i>\$20,279</i>
AREA LIGHTS	176.40	211.60
	51679	62012
	<i>\$2,780</i>	<i>\$3,299</i>
MISC EQUIPMT	337.50	337.50
	98896	98896
	<i>\$5,321</i>	<i>\$5,261</i>
PUMPS & MISC	0.00	0.00
	10	6
	<i>\$1</i>	<i>\$0</i>
SPACE COOL	639.40	473.00
	187335	138582
	<i>\$10,079</i>	<i>\$7,373</i>
SPACE HEAT	1.20	0.00
	349	9
	<i>\$19</i>	<i>\$0</i>
VENT FANS	698.30	278.80
	204609	81682
	<i>\$11,008</i>	<i>\$4,345</i>

Credits Applied: None  
 Passing Criteria = 20279  
 Design (including any credits) = 29207  
 Passing requires Proposed Building cost to be at most 100% of  
 Baseline cost. This Proposed Building is at 144%

<b>FAILS</b>
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Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### External Lighting Compliance

Description	Category	Tradable?	Allowance (W/Unit)	Area or Length or No. of Units (Sqft or ft)	ELPA (W)	CLP (W)
Ext Light 2	Walk way less than 10 feet wide	Yes	1.00	150.0	150	846

Tradable Surfaces: 846 (W) Allowance for Tradable: 157.5 (W)

**FAILS**

All External Lighting: 846 (W)

Compliance check includes a excess/Base allowance of 7.50(W)

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### Lighting Controls Compliance

Acronym	Ashrae ID	Description	Area (sq.ft)	Design CP	Min CP	Compli- ance
Pr0Zo2Sp1	16	Office - Open Plan	14,400	2	2	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES

**PASSES**

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### System Report Compliance

**Pr0Sy1      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled > 760000 Btu/h Cooling Capacity	930326	12.80	9.70	12.90	9.80	PASSES
Heating System	Electric Furnace	1712720	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	31717	0.80	0.82			PASSES

**Pr0Sy3      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	144292	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	270450	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5008	0.80	0.82			PASSES

**Pr0Sy4      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	146944	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	271640	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5030	0.80	0.82			PASSES

**Pr0Sy5      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
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Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	142287	12.80	11.00	12.90	11.20	<b>PASSES</b>
Heating System	Electric Furnace	261750	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4847	0.80	0.82			<b>PASSES</b>
<b>Pr0Sy2</b>	<b>System 1</b>	<b>Constant Volume Packaged System--902</b>				<b>No. of Units 1</b>	
<b>Component</b>	<b>Category</b>	<b>Capacity</b>	<b>Design Eff</b>	<b>Eff Criteria</b>	<b>Design IPLV</b>	<b>IPLV Criteria</b>	<b>Comp- liance</b>
Cooling System	Air Conditioners Air Cooled 65000 to 135000 Btu/h Cooling Capacity	130748	12.80	11.20	12.90	11.40	<b>PASSES</b>
Heating System	Electric Furnace	241140	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4465	0.80	0.82			<b>PASSES</b>
<b>PASSES</b>							

<b>Plant Compliance</b>								
<b>Description</b>	<b>Installed No</b>	<b>Size</b>	<b>Design Eff</b>	<b>Min Eff</b>	<b>Design IPLV</b>	<b>Min IPLV</b>	<b>Category</b>	<b>Comp liance</b>
<b>None</b>								

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**Water Heater Compliance**

Description	Type	Category	Design Eff	Min Eff	Design Loss	Max Loss	Compliance
Water Heater 1	Electric water heater	<= 12 [kW]	0.89	0.86	290.00		PASSES
							<b>PASSES</b>

**Piping System Compliance**

Category	Pipe Dia [inches]	Is Runout?	Operating Temp [F]	Ins Cond [Btu-in/hr .SF.F]	Ins Thick [in]	Req Ins Thick [in]	Compliance
							<b>None</b>

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**Other Required Compliance**

Category	Section	Requirement (write N/A in box if not applicable)	Check
			<input type="checkbox"/>

**Project: TAM A1**

# Florida Building Code, Fifth Edition (2014) - Energy Conservation

EnergyGauge Summit® Fla/Com-2015, Effective Date: June 30, 2015 -- Form 506-2014  
IECC 2012 - Total Building Performance Compliance Option

## Check List

Applications for compliance with the Florida Building Code, Energy Conservation shall include:

- This Checklist
- An Input report generated from the software just after completing compliance calculations without any further changes
- The full compliance report generated by the software that contains the project summary, compliance summary, certifications and detailed component compliance reports
- Boxes appropriately checked in the Miscellaneous report generated by the software at the end of the compliance report

## PROJECT SUMMARY

**Short Desc:** TAM A1

**Description:** TAM Prototype Building A1

**Owner:** Florida Solar Energy Center

**Address1:** Enter Address here

**City:** Cocoa

**Address2:** Enter Address here

**State:** FL

**Zip:** 0

**Type:** Office

**Class:** New Finished building

**Jurisdiction:** MIAMI, MIAMI-DADE COUNTY, FL (232400)

**Conditioned Area:** 22500 SF

**Conditioned & UnConditioned Area:** 22500 SF

**No of Stories:** 1

**Area entered from Plans** 22500 SF

**Permit No:** 0

**Max Tonnage** 77.5

**If different, write in:** \_\_\_\_\_

## Compliance Summary

Component	Design	Criteria	Result
Gross Energy Cost (in \$)	27,021.0	17,035.0	<b>FAILED</b>
LIGHTING CONTROLS			<b>PASSES</b>
EXTERNAL LIGHTING			<b>FAILS</b>
HVAC SYSTEM			<b>PASSES</b>
PLANT			<b>No Entry</b>
WATER HEATING SYSTEMS			<b>PASSES</b>
PIPING SYSTEMS			<b>No Entry</b>
Met all required compliance from Check List?			<b>Yes/No/NA</b>

### IMPORTANT MESSAGE

Info 5009 -- -- -- An input report of this design building must be submitted along with this Compliance Report

## CERTIFICATIONS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code

Prepared By: \_\_\_\_\_

Building Official: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

I certify that this building is in compliance with the FLorida Energy Efficiency Code

Owner Agent: \_\_\_\_\_

Date: \_\_\_\_\_

If Required by Florida law, I hereby certify (\*) that the system design is in compliance with the Florida Energy Efficiency Code

Architect: \_\_\_\_\_

Reg No: \_\_\_\_\_

Electrical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Lighting Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Mechanical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Plumbing Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

(\*) Signature is required where Florida Law requires design to be performed by registered design professionals. Typed names and registration numbers may be used where all relevant information is contained on signed/sealed plans.

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**Building End Uses**

	1) Proposed	2) Baseline
<b>Total</b>	<b>1,717.30</b>	<b>1,288.00</b>
	<b>\$27,021</b>	<b>\$20,041</b>
ELECTRICITY(MBtu/kWh/\$)	1,717.30	1,288.00
	503192	377424
	<b>\$27,021</b>	<b>\$20,041</b>
AREA LIGHTS	176.40	211.60
	51679	62012
	<b>\$2,775</b>	<b>\$3,293</b>
MISC EQUIPMT	337.50	337.50
	98896	98896
	<b>\$5,311</b>	<b>\$5,251</b>
PUMPS & MISC	0.00	0.00
	10	3
	<b>\$1</b>	<b>\$0</b>
SPACE COOL	576.50	472.10
	168921	138329
	<b>\$9,071</b>	<b>\$7,345</b>
SPACE HEAT	1.70	0.00
	507	6
	<b>\$27</b>	<b>\$0</b>
VENT FANS	625.20	266.80
	183179	78178
	<b>\$9,837</b>	<b>\$4,151</b>

Credits Applied: None  
 Passing Criteria = 17035  
 Design (including any credits) = 27021  
 Passing requires Proposed Building cost to be at most 85% of  
 Baseline cost. This Proposed Building is at 134.8%

<b>FAILS</b>
--------------

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### External Lighting Compliance

Description	Category	Tradable?	Allowance (W/Unit)	Area or Length or No. of Units (Sqft or ft)	ELPA (W)	CLP (W)
Ext Light 2	Walk way less than 10 feet wide	Yes	1.00	150.0	150	846

**Tradable Surfaces: 846 (W) Allowance for Tradable: 157.5 (W)**

**FAILS**

**All External Lighting: 846 (W)**

**Compliance check includes a excess/Base allowance of 7.50(W)**

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### Lighting Controls Compliance

Acronym	Ashrae ID	Description	Area (sq.ft)	Design CP	Min CP	Compli- ance
Pr0Zo2Sp1	16	Office - Open Plan	14,400	2	2	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES

**PASSES**

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**System Report Compliance**

**Pr0Sy1      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled > 760000 Btu/h Cooling Capacity	930326	12.80	9.70	12.90	9.80	PASSES
Heating System	Electric Furnace	1712720	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	31717	0.80	0.82			PASSES

**Pr0Sy3      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	144292	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	270450	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5008	0.80	0.82			PASSES

**Pr0Sy4      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	146944	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	271640	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5030	0.80	0.82			PASSES

**Pr0Sy5      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
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Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	142287	12.80	11.00	12.90	11.20	<b>PASSES</b>
Heating System	Electric Furnace	261750	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4847	0.80	0.82			<b>PASSES</b>
<b>Pr0Sy2</b>	<b>System 1</b>				<b>Constant Volume Packaged System--902</b>		<b>No. of Units 1</b>
<b>Component</b>	<b>Category</b>	<b>Capacity</b>	<b>Design Eff</b>	<b>Eff Criteria</b>	<b>Design IPLV</b>	<b>IPLV Criteria</b>	<b>Comp- liance</b>
Cooling System	Air Conditioners Air Cooled 65000 to 135000 Btu/h Cooling Capacity	130748	12.80	11.20	12.90	11.40	<b>PASSES</b>
Heating System	Electric Furnace	241140	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4465	0.80	0.82			<b>PASSES</b>
<b>PASSES</b>							

<b>Plant Compliance</b>								
<b>Description</b>	<b>Installed No</b>	<b>Size</b>	<b>Design Eff</b>	<b>Min Eff</b>	<b>Design IPLV</b>	<b>Min IPLV</b>	<b>Category</b>	<b>Comp liance</b>
<b>None</b>								

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### Water Heater Compliance

Description	Type	Category	Design Eff	Min Eff	Design Loss	Max Loss	Compliance
Water Heater 1	Electric water heater	<= 12 [kW]	0.89	0.86	290.00		<b>PASSES</b>
<b>PASSES</b>							

### Piping System Compliance

Category	Pipe Dia [inches]	Is Runout?	Operating Temp [F]	Ins Cond [Btu-in/hr .SF.F]	Ins Thick [in]	Req Ins Thick [in]	Compliance
<b>None</b>							

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### Other Required Compliance

Category	Section	Requirement (write N/A in box if not applicable)	Check
			<input type="checkbox"/>

**Project: TAM A1**

# Florida Building Code, Fifth Edition (2014) - Energy Conservation

EnergyGauge Summit® Fla/Com-2015, Effective Date: June 30, 2015 -- Form 506-2014  
ASHRAE 90.1-2010 - Prescriptive Compliance Option

## Check List

Applications for compliance with the Florida Building Code, Energy Conservation shall include:

- This Checklist
- An Input report generated from the software just after completing compliance calculations without any further changes
- The full compliance report generated by the software that contains the project summary, compliance summary, certifications and detailed component compliance reports
- Boxes appropriately checked in the Miscellaneous report generated by the software at the end of the compliance report

## PROJECT SUMMARY

**Short Desc:** TAM A1

**Description:** TAM Prototype Building A1

**Owner:** Florida Solar Energy Center

**Address1:** Enter Address here

**City:** Cocoa

**Address2:** Enter Address here

**State:** FL

**Zip:** 0

**Type:** Office

**Class:** New Finished building

**Jurisdiction:** MIAMI, MIAMI-DADE COUNTY, FL (232400)

**Conditioned Area:** 22500 SF

**Conditioned & UnConditioned Area:** 22500 SF

**No of Stories:** 1

**Area entered from Plans** 22500 SF

**Permit No:** 0

**Max Tonnage** 77.5

**If different, write in:** \_\_\_\_\_

## Compliance Summary

Component	Design	Criteria	Result
ENVELOPE PRESCRIPTIVE			<b>FAILS</b>
LIGHTING POWER	16,875.0	20,250.0	<b>PASSES</b>
LIGHTING CONTROLS			<b>PASSES</b>
EXTERNAL LIGHTING			<b>FAILS</b>
HVAC SYSTEM			<b>PASSES</b>
PLANT			<b>No Entry</b>
WATER HEATING SYSTEMS			<b>PASSES</b>
PIPING SYSTEMS			<b>No Entry</b>
Met all required compliance from Check List?			<b>Yes/No/NA</b>

### IMPORTANT MESSAGE

Info 5009 -- -- -- An input report of this design building must be submitted along with this Compliance Report

## CERTIFICATIONS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code

Prepared By: \_\_\_\_\_

Building Official: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

I certify that this building is in compliance with the FLorida Energy Efficiency Code

Owner Agent: \_\_\_\_\_

Date: \_\_\_\_\_

If Required by Florida law, I hereby certify (\*) that the system design is in compliance with the Florida Energy Efficiency Code

Architect: \_\_\_\_\_

Reg No: \_\_\_\_\_

Electrical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Lighting Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Mechanical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Plumbing Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

(\*) Signature is required where Florida Law requires design to be performed by registered design professionals. Typed names and registration numbers may be used where all relevant information is contained on signed/sealed plans.

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### Prescriptive Envelope Compliance

Item	Zone	Description	Design	Criteria	Meet Req.
Glass	TAM A1	East glass area must be less than or equal to South glass area	550.000	550.000	Yes
Glass	TAM A1	West glass area must be less than or equal to South glass area	550.000	550.000	Yes
Glass	Interior	Percent glass Max allowed (%)	.000	40.000	Yes
Skylights	Interior	Percent Skylight Max allowed (%)	15.624	5.000	No
Pr0Zo2Rf1	Interior	Exterior Roof UValue Max allowed	.370	0.063	No
Pr0Zo2Rf1Sk2	Pr0Zo2Rf1	Skylight: SHGC Max allowed	.250	0.190	No
Pr0Zo2Rf1Sk2	Pr0Zo2Rf1Sk2	Skylight: UValue Max allowed	1.000	1.360	Yes
Glass	Perimeter A	Percent glass Max allowed (%)	30.556	40.000	Yes
Pr0Zo3Wa2	Perimeter A	Exterior Wall: UValue Max allowed	.460	0.089	No
Pr0Zo3Wa2Wi1	Pr0Zo3Wa2	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo3Wa2Wi1	Pr0Zo3Wa2	Exterior Window: UValue Max allowed	.900	1.200	Yes
Skylights	Perimeter A	Percent Skylight Max allowed (%)	.000	5.000	Yes
Pr0Zo3Rf1	Perimeter A	Exterior Roof UValue Max allowed	.370	0.063	No
Glass	Perimeter B	Percent glass Max allowed (%)	30.556	40.000	Yes
Pr0Zo5Wa2	Perimeter B	Exterior Wall: UValue Max allowed	.460	0.089	No
Pr0Zo5Wa2Wi1	Pr0Zo5Wa2	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo5Wa2Wi1	Pr0Zo5Wa2	Exterior Window: UValue Max allowed	.900	1.200	Yes
Skylights	Perimeter B	Percent Skylight Max allowed (%)	.000	5.000	Yes
Pr0Zo5Rf1	Perimeter B	Exterior Roof UValue Max allowed	.370	0.063	No
Glass	Perimeter C	Percent glass Max allowed (%)	26.772	40.000	Yes
Pr0Zo6Wa1	Perimeter C	Exterior Wall: UValue Max allowed	.460	0.089	No
Pr0Zo6Wa1Wi1	Pr0Zo6Wa1	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo6Wa1Wi1	Pr0Zo6Wa1	Exterior Window: UValue Max allowed	.900	1.200	Yes
Pr0Zo6Wa3	Perimeter C	Exterior Wall: UValue Max allowed	1.110	0.089	No
Skylights	Perimeter C	Percent Skylight Max allowed (%)	.000	5.000	Yes
Pr0Zo6Rf1	Perimeter C	Exterior Roof UValue Max allowed	.370	0.063	No
Glass	Perimeter D	Percent glass Max allowed (%)	30.556	40.000	Yes
Pr0Zo7Wa1	Perimeter D	Exterior Wall: UValue Max allowed	.460	0.089	No
Pr0Zo7Wa1Wi1	Pr0Zo7Wa1	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo7Wa1Wi1	Pr0Zo7Wa1	Exterior Window: UValue Max allowed	.900	1.200	Yes
Skylights	Perimeter D	Percent Skylight Max allowed (%)	.000	5.000	Yes
Pr0Zo7Rf1	Perimeter D	Exterior Roof UValue Max allowed	.370	0.063	No

**DOES NOT meet Prescriptive Envelope Requirements -- FAILS**

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**External Lighting Compliance**

Description	Category	Tradable?	Allowance (W/Unit)	Area or Length or No. of Units (Sqft or ft)	ELPA (W)	CLP (W)
Ext Light 2	Walk way less than 10 feet wide	Yes	1.00	150.0	150	846

Tradable Surfaces: 846 (W) Allowance for Tradable: 157.5 (W)  
 All External Lighting: 846 (W)  
 Compliance check includes a excess/Base allowance of 7.50(W)

**FAILS**

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**Lighting Power Compliance**

Space	Ashrae ID	Description	Area (sq.ft)	Height (ft)	No. of Spaces	Design (W)	Effective (W)	Allowance (W)
Pr0Zo2Sp1	16	Office - Open Plan	14,400	12.0	1	10800	10800	12,960
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823

Design : 16875 (W)  
 Effective: 16875 (W)  
 Allowance: 20250 (W)

Passing requires Design to be at most 100% of Criteria

**PASSES**

**Project: TAM A1**  
**Title: TAM Prototype Building A1**  
**Type: Office**  
**(WEA File: FL\_MIAMI\_INTL\_AP.tm3)**

**Lighting Controls Compliance**

<b>Acronym</b>	<b>Ashrae ID</b>	<b>Description</b>	<b>Area (sq.ft)</b>	<b>Design CP</b>	<b>Min CP</b>	<b>Compliance</b>
Pr0Zo2Sp1	16	Office - Open Plan	14,400	2	2	<b>PASSES</b>
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	<b>PASSES</b>
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	<b>PASSES</b>
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	<b>PASSES</b>
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	<b>PASSES</b>

**PASSES**



Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### System Report Compliance

**Pr0Sy1      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled > 760000 Btu/h Cooling Capacity	930326	12.80	9.70	12.90	9.80	PASSES
Heating System	Electric Furnace	1712720	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	31717	0.80	0.82			PASSES

**Pr0Sy3      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	144292	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	270450	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5008	0.80	0.82			PASSES

**Pr0Sy4      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	146944	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	271640	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5030	0.80	0.82			PASSES

**Pr0Sy5      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
-----------	----------	----------	------------	--------------	-------------	---------------	------------

Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	142287	12.80	11.00	12.90	11.20	<b>PASSES</b>
Heating System	Electric Furnace	261750	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4847	0.80	0.82			<b>PASSES</b>
<b>Pr0Sy2</b>	<b>System 1</b>				<b>Constant Volume Packaged System--902</b>		<b>No. of Units 1</b>
<b>Component</b>	<b>Category</b>	<b>Capacity</b>	<b>Design Eff</b>	<b>Eff Criteria</b>	<b>Design IPLV</b>	<b>IPLV Criteria</b>	<b>Comp- liance</b>
Cooling System	Air Conditioners Air Cooled 65000 to 135000 Btu/h Cooling Capacity	130748	12.80	11.20	12.90	11.40	<b>PASSES</b>
Heating System	Electric Furnace	241140	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4465	0.80	0.82			<b>PASSES</b>
<b>PASSES</b>							

<b>Plant Compliance</b>								
<b>Description</b>	<b>Installed No</b>	<b>Size</b>	<b>Design Eff</b>	<b>Min Eff</b>	<b>Design IPLV</b>	<b>Min IPLV</b>	<b>Category</b>	<b>Comp liance</b>
<b>None</b>								

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**Water Heater Compliance**

Description	Type	Category	Design Eff	Min Eff	Design Loss	Max Loss	Compliance
Water Heater 1	Electric water heater	<= 12 [kW]	0.89	0.86	290.00		PASSES

**PASSES**

**Piping System Compliance**

Category	Pipe Dia [inches]	Is Runout?	Operating Temp [F]	Ins Cond [Btu-in/hr .SF.F]	Ins Thick [in]	Req Ins Thick [in]	Compliance

**None**

Project: TAM A1  
 Title: TAM Prototype Building A1  
 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

**Other Required Compliance**

Category	Section	Requirement (write N/A in box if not applicable)	Check
			<input type="checkbox"/>

**Project: TAM A1**

# Florida Building Code, Fifth Edition (2014) - Energy Conservation

EnergyGauge Summit® Fla/Com-2015, Effective Date: June 30, 2015 -- Form 506-2014  
IECC 2012 - Prescriptive Compliance Option

## Check List

Applications for compliance with the Florida Building Code, Energy Conservation shall include:

- This Checklist
- An Input report generated from the software just after completing compliance calculations without any further changes
- The full compliance report generated by the software that contains the project summary, compliance summary, certifications and detailed component compliance reports
- Boxes appropriately checked in the Miscellaneous report generated by the software at the end of the compliance report

## PROJECT SUMMARY

**Short Desc:** TAM A1

**Description:** TAM Prototype Building A1

**Owner:** Florida Solar Energy Center

**Address1:** Enter Address here

**City:** Cocoa

**Address2:** Enter Address here

**State:** FL

**Zip:** 0

**Type:** Office

**Class:** New Finished building

**Jurisdiction:** MIAMI, MIAMI-DADE COUNTY, FL (232400)

**Conditioned Area:** 22500 SF

**Conditioned & UnConditioned Area:** 22500 SF

**No of Stories:** 1

**Area entered from Plans** 22500 SF

**Permit No:** 0

**Max Tonnage** 77.5

**If different, write in:** \_\_\_\_\_

## Compliance Summary

Component	Design	Criteria	Result
ENVELOPE PRESCRIPTIVE			<b>FAILS</b>
Additional Efficiency Prescriptive Option			<b>Failed</b>
LIGHTING POWER	16,875.0	20,250.0	<b>PASSES</b>
LIGHTING CONTROLS			<b>PASSES</b>
EXTERNAL LIGHTING			<b>FAILS</b>
HVAC SYSTEM			<b>PASSES</b>
PLANT			<b>No Entry</b>
WATER HEATING SYSTEMS			<b>PASSES</b>
PIPING SYSTEMS			<b>No Entry</b>
Met all required compliance from Check List?			<b>Yes/No/NA</b>
<b>IMPORTANT MESSAGE</b>			
Info 5009 -- -- -- An input report of this design building must be submitted along with this Compliance Report			

## CERTIFICATIONS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code

Prepared By: \_\_\_\_\_

Building Official: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

I certify that this building is in compliance with the FLorida Energy Efficiency Code

Owner Agent: \_\_\_\_\_

Date: \_\_\_\_\_

If Required by Florida law, I hereby certify (\*) that the system design is in compliance with the Florida Energy Efficiency Code

Architect: \_\_\_\_\_

Reg No: \_\_\_\_\_

Electrical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Lighting Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Mechanical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Plumbing Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

(\*) Signature is required where Florida Law requires design to be performed by registered design professionals. Typed names and registration numbers may be used where all relevant information is contained on signed/sealed plans.

Project: TAM A1  
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 Type: Office  
 (WEA File: FL\_MIAMI\_INTL\_AP.tm3)

### Prescriptive Envelope Compliance

Item	Zone	Description	Design	Criteria	Meet Req.
Glass	Interior	Percent glass Max allowed (%)	.000	30.000	Yes
Skylights	Interior	Percent Skylight Max allowed (%)	15.624	3.000	No
Pr0Zo2Rf1	Interior	Exterior Roof UValue Max allowed	.370	0.048	No
Pr0Zo2Rf1	Interior	Exterior Roof Absorptance (3-year aged) Max allowed	.400	0.450	Yes
Pr0Zo2Rf1	Interior	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes
Pr0Zo2Rf1Sk2	Pr0Zo2Rf1	Skylight: SHGC Max allowed	.250	0.350	Yes
Pr0Zo2Rf1Sk2	Pr0Zo2Rf1Sk2	Skylight: UValue Max allowed	1.000	0.750	No
Glass	Perimeter A	Percent glass Max allowed (%)	30.556	30.000	No
Pr0Zo3Wa2	Perimeter A	Exterior Wall: UValue Max allowed	.460	0.064	No
Pr0Zo3Wa2Wi1	Pr0Zo3Wa2	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo3Wa2Wi1	Pr0Zo3Wa2	Exterior Window: UValue Max allowed	.900	0.500	No
Skylights	Perimeter A	Percent Skylight Max allowed (%)	.000	3.000	Yes
Pr0Zo3Rf1	Perimeter A	Exterior Roof UValue Max allowed	.370	0.048	No
Pr0Zo3Rf1	Perimeter A	Exterior Roof Absorptance (3-year aged) Max allowed	.400	0.450	Yes
Pr0Zo3Rf1	Perimeter A	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes
Glass	Perimeter B	Percent glass Max allowed (%)	30.556	30.000	No
Pr0Zo5Wa2	Perimeter B	Exterior Wall: UValue Max allowed	.460	0.064	No
Pr0Zo5Wa2Wi1	Pr0Zo5Wa2	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo5Wa2Wi1	Pr0Zo5Wa2	Exterior Window: UValue Max allowed	.900	0.500	No
Skylights	Perimeter B	Percent Skylight Max allowed (%)	.000	3.000	Yes
Pr0Zo5Rf1	Perimeter B	Exterior Roof UValue Max allowed	.370	0.048	No
Pr0Zo5Rf1	Perimeter B	Exterior Roof Absorptance (3-year aged) Max allowed	.400	0.450	Yes
Pr0Zo5Rf1	Perimeter B	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes
Glass	Perimeter C	Percent glass Max allowed (%)	26.772	30.000	Yes
Pr0Zo6Wa1	Perimeter C	Exterior Wall: UValue Max allowed	.460	0.064	No
Pr0Zo6Wa1Wi1	Pr0Zo6Wa1	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo6Wa1Wi1	Pr0Zo6Wa1	Exterior Window: UValue Max allowed	.900	0.500	No
Pr0Zo6Wa3	Perimeter C	Exterior Wall: UValue Max allowed	1.110	0.064	No
Skylights	Perimeter C	Percent Skylight Max allowed (%)	.000	3.000	Yes
Pr0Zo6Rf1	Perimeter C	Exterior Roof UValue Max allowed	.370	0.048	No
Pr0Zo6Rf1	Perimeter C	Exterior Roof Absorptance (3-year aged) Max allowed	.400	0.450	Yes
Pr0Zo6Rf1	Perimeter C	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes
Glass	Perimeter D	Percent glass Max allowed (%)	30.556	30.000	No
Pr0Zo7Wa1	Perimeter D	Exterior Wall: UValue Max allowed	.460	0.064	No
Pr0Zo7Wa1Wi1	Pr0Zo7Wa1	Exterior Window: SHGC Max allowed	.190	0.250	Yes
Pr0Zo7Wa1Wi1	Pr0Zo7Wa1	Exterior Window: UValue Max allowed	.900	0.500	No
Skylights	Perimeter D	Percent Skylight Max allowed (%)	.000	3.000	Yes
Pr0Zo7Rf1	Perimeter D	Exterior Roof UValue Max allowed	.370	0.048	No

Pr0Zo7Rf1	Perimeter D	Exterior Roof Absorptance (3-year aged) Max allowed	.400	0.450	Yes
Pr0Zo7Rf1	Perimeter D	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes
<b>DOES NOT meet Prescriptive Envelope Requirements -- FAILS</b>					

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**External Lighting Compliance**

Description	Category	Tradable?	Allowance (W/Unit)	Area or Length or No. of Units (Sqft or ft)	ELPA (W)	CLP (W)
Ext Light 2	Walk way less than 10 feet wide	Yes	1.00	150.0	150	846

**Tradable Surfaces: 846 (W) Allowance for Tradable: 157.5 (W)**

**All External Lighting: 846 (W)**

**Compliance check includes a excess/Base allowance of 7.50(W)**

**FAILS**

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**Lighting Power Compliance**

Space	Ashrae ID	Description	Area (sq.ft)	Height (ft)	No. of Spaces	Design (W)	Effective (W)	Allowance (W)
Pr0Zo2Sp1	16	Office - Open Plan	14,400	12.0	1	10800	10800	12,960
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823
Pr0Zo3Sp1	16	Office - Open Plan	2,025	12.0	1	1519	1519	1,823

**Design : 16875 (W)**

**Effective: 16875 (W)**

**Allowance: 20250 (W)**

**Passing requires Design to be at most 100% of Criteria**

**PASSES**



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### Lighting Controls Compliance

Acronym	Ashrae ID	Description	Area (sq.ft)	Design CP	Min CP	Compliance
Pr0Zo2Sp1	16	Office - Open Plan	14,400	2	2	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES
Pr0Zo3Sp1	16	Office - Open Plan	2,025	1	1	PASSES

**PASSES**

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### System Report Compliance

**Pr0Sy1      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled > 760000 Btu/h Cooling Capacity	930326	12.80	9.70	12.90	9.80	PASSES
Heating System	Electric Furnace	1712720	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	31717	0.80	0.82			PASSES

**Pr0Sy3      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	144292	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	270450	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5008	0.80	0.82			PASSES

**Pr0Sy4      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	146944	12.80	11.00	12.90	11.20	PASSES
Heating System	Electric Furnace	271640	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	5030	0.80	0.82			PASSES

**Pr0Sy5      System 1      Constant Volume Packaged System--902      No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
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Cooling System	Air Conditioners Air Cooled 135000 to 240000 Btu/h Clg Capacity	142287	12.80	11.00	12.90	11.20	<b>PASSES</b>
Heating System	Electric Furnace	261750	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4847	0.80	0.82			<b>PASSES</b>
<b>Pr0Sy2</b>	<b>System 1</b>				<b>Constant Volume Packaged System--902</b>		<b>No. of Units 1</b>
<b>Component</b>	<b>Category</b>	<b>Capacity</b>	<b>Design Eff</b>	<b>Eff Criteria</b>	<b>Design IPLV</b>	<b>IPLV Criteria</b>	<b>Comp- liance</b>
Cooling System	Air Conditioners Air Cooled 65000 to 135000 Btu/h Cooling Capacity	130748	12.80	11.20	12.90	11.40	<b>PASSES</b>
Heating System	Electric Furnace	241140	1.00	1.00			<b>PASSES</b>
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	4465	0.80	0.82			<b>PASSES</b>
<b>PASSES</b>							

<b>Plant Compliance</b>								
<b>Description</b>	<b>Installed No</b>	<b>Size</b>	<b>Design Eff</b>	<b>Min Eff</b>	<b>Design IPLV</b>	<b>Min IPLV</b>	<b>Category</b>	<b>Comp liance</b>
<b>None</b>								

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### Water Heater Compliance

Description	Type	Category	Design Eff	Min Eff	Design Loss	Max Loss	Compliance
Water Heater 1	Electric water heater	<= 12 [kW]	0.89	0.86	290.00		PASSES
<b>PASSES</b>							

### Piping System Compliance

Category	Pipe Dia [inches]	Is Runout?	Operating Temp [F]	Ins Cond [Btu-in/hr .SF.F]	Ins Thick [in]	Req Ins Thick [in]	Compliance
<b>None</b>							

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### Other Required Compliance

Category	Section	Requirement (write N/A in box if not applicable)	Check
			<input type="checkbox"/>

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