Energy Cost Budget (ECB) Compliance Report

Project Name:		
Project Address:		Date:
Designer of Record:	Email:	Telephone:
Contact Person:	Email:	Telephone:
City:		

General Project Information

Design Documents Used as Basis for Energy Models Name:		Date
Simulation Program Name:	Version:	Link to Standard 140 Results:
Weather Station Location:	Data Type:	File Name
Climate Zone:		

Building areas and systems excluded from energy model, if any.

Yet to be designed systems and components, if any

Table 1 Building Area Summary

Building Use	Conditioned Area (ft² or m²)		Semi-heated and Uncond. Area (ft² or m²)		Total Area (ft² or m²)		Unenclosed Space Area (ft² or m²)	Above Grade Floors	Below Grade Floors
	New Const.	*Alteration*	*New Const.*	*Alteration*	*New Const.*	*Alteration*			
Total Area									

Table 2 Energy Sources

Energy Source Type	Energy Consumption Units	Demand Units	Rate Type	Fee Structure Description

Table 3 Advisory Messages

	Proposed Design Model	Baseline Building Model	Difference: Proposed – Baseline
Number of hours heating loads not met			
Number of hours cooling loads not met			
Number of warnings			
Number of errors			
Number of defaults overridden			

Description of Proposed and Baseline Design Models

For each of the following subsections, provide the following:

a. A list of the energy-related features that are included in the design and on which compliance with the provisions of Section 11 is based. This list must document all energy features that differ between the models used in the energy cost budget and the design (11.7.2 d)

b. A list showing compliance for the *proposed design* with all the requirements of Sections 5.4, 6.4, 7.4, 8.4, 9.4, and 10.4 (mandatory provisions). (11.7.2 e)

1. Building Envelope

Complete Building Envelope Compliance Form 2019 in this User's Manual to describe proposed design. Use the same tables to document corresponding component of energy cost budget model as required by 11.7.2 (d), and to demonstrate that project meets each applicable mandatory requirement as required by 11.7.2 (e)

2. HVAC

Complete HVAC Compliance Form 2019 in this User's Manual to describe proposed design. Use the same tables to document corresponding component of energy cost budget model as required by 11.7.2 (d), and to demonstrate that project meets each applicable mandatory requirement as required by 11.7.2 (e).

3. Service Water Heating

Complete Service Water Heater Compliance Form 2019 in this User's Manual to describe proposed design. Use the same tables to document corresponding component of energy cost budget model as required by 11.7.2 (d), and to demonstrate that project meets each applicable mandatory requirement as required by 11.7.2 (e).

4. Lighting

Complete Lighting Compliance Form 2019 in this User's Manual to describe proposed design. Use the same tables to document corresponding component of energy cost budget model as required by 11.7.2 (d), and to demonstrate that project meets each applicable mandatory requirement as required by 11.7.2 (e).

5. Other Equipment

System Name	System Description	Prescriptive Requirements	Proposed Design Model Inputs	Baseline Model Inputs

6. **Process loads and special systems.**
   Provide additional sub-sections for any major process equipment or special systems (such as combined heat and power) that are included in the simulation.

Renewable Energy

System Name:	Technology Type:	Located On-Site? ☐ Yes ☐ No
☐ Building owner owns the *on-site renewable energy system.*		
☐ Building owner has signed a lease agreement for *the on-site renewable energy system* for at least 15 years.		
☐ Building owner has signed a contractual agreement to purchase *energy* generated by the *on-site renewable energy system* for at least 15 years.		
☐ Other.		

Exceptional Calculations

Name	Description	Reduction in Energy Cost by Fuel Type
Total		

The following supporting documentation is provided for each exceptional calculation (11.4.5):

☐ Step-by-step documentation of the exceptional calculation method performed, detailed enough to reproduce the results.

☐ Copies of all spreadsheets used to perform the calculations.

☐ A sensitivity analysis of *energy* consumption in which each of the input parameters is varied from half to double the value assumed.

☐ Theoretical or empirical information supporting the accuracy of the method.

Table 4 Energy Use and Cost Summary by Energy Source and End Use*

		Proposed Building		Baseline Building	
Regulated Energy	Energy Type	Energy (10^6 Btu/yr or MJ/yr)	Energy Cost ($/yr)	Energy (10^6 Btu/yr or MJ/yr)	Energy Cost ($/yr)
Lighting					
Space heating					
Space cooling					
Fans					
Pumps					
Heat rejection					
Service water heating					
Refrigeration					
Elevators and escalators					
Motors					
Transformers					
Other regulated loads					
Total Regulated Electric Energy					
Total Regulated Gas Energy					
Total Regulated Energy					
Unregulated Energy					
Office equipment					
Other computers/servers					
Cooking (commercial)					
Other unregulated loads					
Total Unregulated Electric Energy					
Total Unregulated Gas Energy					
Total Unregulated Energy					
Exceptional Calculations Energy Savings					
Total Energy Including Regulated, Unregulated and Exceptional Calculations					

* These results use assumptions for showing compliance during a typical year; actual energy costs may be substantially different.

☐ The total reduction in the energy cost of the proposed design for all exceptional calculations constitute no more than half of the difference between the baseline building performance and the proposed building performance.

Table 5 Energy Summary by Energy Source*

	Proposed Building		Budget Building		Proposed / Budget	
	Energy (10^6 Btu/yr or GJ/yr)	Cost ($/yr)	Energy (10^6 Btu/yr or GJ/yr)	Cost ($/yr)	Energy (%)	Cost (%)
Electricity						
Natural gas						
Other fossil fuel						
District steam						
Total without renewable energy						
Renewable Energy						
Total including renewable energy						

* These results use assumptions for showing compliance during a typical year; actual energy costs may be substantially different.

☐ The reduction in *design energy cost* associated with *on-site renewable energy* is no more than 5% of the calculated *energy cost budget*.

Supporting Documentation Checklist

☐ *Building* elevations and *floor plans (11.7.2 f).*

☐ A diagram showing the *thermal blocks* used in the computer simulation *(11.7.2 g).*

☐ An explanation of any significant modeling assumptions *(11.7.2 h).*

☐ Backup calculations and material to support data inputs (e.g., *U-factors* for *building envelope* assemblies, NFRC ratings for *fenestration*, end-uses identified in Table 11.5.1, "1. Design Model," paragraph [a]) *(11.7.2 i).*

☐ Input and output reports from the *simulation program* or compliance software, including a breakdown of *energy* use by at least the following components: lighting, internal *equipment* loads, *service water-heating equipment*, *space*-heating *equipment*, *space*-cooling and heat rejection *equipment*, fans, and other HVAC *equipment* (such as pumps). The output reports must also show the amount of *unmet load hours* for both the *proposed design* and *baseline building design (11.7.2 j).*

Compliance Result

☐ The design detailed in the above-referenced plans complies with the mandatory provisions of ANSI/ASHRAE/IES Standard 90.1-2019 and the design energy cost does not exceed the energy cost budget. Therefore, this design **DOES COMPLY** with the ANSI/ASHRAE/IES Standard 90.1-2019 ECB compliance methodology.

Individual certifying authenticity of the data provided in this analysis:

Signature	Title