



BETA

CREDIT COMPLIANCE

- Performance Rating Method, ASHRAE 90.1-2004 Appendix G or equivalent (up to 10 points possible, 2 points required)



PERFORMANCE RATING METHOD

I confirm that the energy simulation software used for this project has all capabilities described in EITHER section 'G2 Simulation General Requirements' in Appendix G of ASHRAE 90.1-2004 OR the analogous section of the alternative qualifying energy code used.

I confirm that the baseline building and proposed building in this project's energy simulation runs use the assumptions and modeling methodology described in EITHER Appendix G of ASHRAE 90.1-2004 OR the analogous section of the alternative qualifying energy code used.

Complete the following sections to document compliance :

- Section 1.1 - General Information
- Section 1.2 - Space Summary
- Section 1.3 - Advisory Messages
- Section 1.4 - Comparison of Proposed Design Versus Baseline Design Energy Model Inputs
- Section 1.5 - Energy Type Summary
- Section 1.6 - On-Site Renewable Energy (if applicable)
- Section 1.7 - Exceptional Calculation Measure Summary (if applicable)
- Section 1.8 - Performance Rating Method Compliance Report

Section 1.1 - General Information

Provide the following data for your project

Simulation Program:

Quantity of Stories:

Principal Heating Source:

Weather File:

Energy Code Used:

Climate Zone:

New Construction Percent: 100 %

Existing Renovation Percent: 0 %

Enter the Target Finder score for your building from the Energy Star website (http://www.energystar.gov/index.cfm?fuseaction=target_finder.&CFID=154897). The score has no bearing on the number of EAc1 points earned. Use the following process to evaluate the Target Finder score:

1. Enter the facility information
2. Enter the facility characteristics. Select each primary and secondary space type that applies to the project. Then complete the required information for each space type.
4. Enter the total energy use per energy source for your project based on the totals reflected in the Proposed Design energy simulation output report.

Target Finder Score:



Section 1.2 - Space Summary

Provide the space summary for your project

(click "CLEAR" to clear the contents of any row All numeric entries must be entered as whole numbers without commas):

Building Use (Occupancy Type)	Conditioned Area (sf)	Unconditioned Area (sf)	Total Area (sf)	
School	79,695		79,695	<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
Total:	79,695		79,695	

Section 1.3 - Advisory Messages

Complete the following information from the simulation output files (all entries should be entered as whole numbers, without commas)

	Proposed Building	Baseline Building (0 deg. rotation)	Difference
Number of hours heating loads not met:			
Number of hours cooling loads not met:	185	194	9
Number of warning messages:			
Number of error messages:			
Number of defaults overridden:			



Section 1.4 - Comparison of Proposed Design Versus Baseline Design Energy Model Inputs

Use **Table 1.4** to document the Baseline and Proposed design energy model inputs for your project. Include descriptions for:

1. Exterior wall, underground wall, roof, floor, and slab assemblies including framing type, assembly R-values, assembly U-factors, and roof reflectivity when modeling cool roofs. (Refer to ASHRAE 90.1 Appendix A)
2. Fenestration types, assembly U-factors (including the impact of the frame on the assembly), SHGCs, and visual light transmittances, overall window-to-gross wall ratio, fixed shading devices, and automated movable shading devices.
3. Interior lighting power densities, exterior lighting power, process lighting power, and lighting controls modeled for credit.
4. Receptacle equipment, elevators or escalators, refrigeration equipment, and other process loads.
5. HVAC system information including types and efficiencies, fan control, fan supply air volume, fan power, economizer control, demand control ventilation, exhaust heat recovery, pump power and controls, and any other pertinent system information. (Include the ASHRAE 90.1-2004 Table G.3.1.1B Baseline System Number).
6. Domestic hot water system type, efficiency and storage tank volume.
7. General schedule information

Documentation should be sufficient to justify the energy and cost savings numbers reported in the Performance Rating Table.

(Click "CLEAR" to clear the contents of any row.)

TABLE 1.4 - Comparison of Proposed Design Versus Baseline Design			
Model Input Parameter	Proposed Design Input	Baseline Design Input	
Exterior Wall Construction	5/8-in gypsum board R-19 batt insulation 1/2-in sheetrock (U = 0.047) +	1-in stucco R-7 board insulation, 1-in stucco (U = 0.12)	CLEAR
Roof Construction	Steel deck Board insulation, Built-up roofing (U = 0.045) (Reflectivity = 0.25) +	Steel deck R-14 board insulation, Wood shingles (U = 0.063) (Reflectivity = 1)	CLEAR
Floor/Slab Construction	Slab Floor on Grade (U = 0.052)	Slab Floor on Grade (U = 0.052)	CLEAR
Window-to-gross wall ratio	29%	29%	CLEAR
Fenestration type	1. Fixed Windows 2. Exterior Doors 3. Exterior Glass Doors +	1. Fixed Windows 2. Fixed Windows North facing. 3. Exterior Doors +	CLEAR
Fenestration U-factor	1. - U = 0.40 2. - Door U-Value = 0.30 Glass U-Value=0.58 Assembly U-Value Per ASHRAE Fundamental +	1. - U = 0.57 2. - U = 0.57 3. - Door U-Value = 0.30 Glass U-Value=0.58 +	CLEAR
Fenestration SHGC - North	1. - SHGC = 0.44 2. - SHGC = 0.88 Shading Coefficient Per ASHRAE Fundamental +	1. - N/A 2. - SHGC = 0.49 3. - SHGC = 0.88 +	CLEAR
Fenestration SHGC - Non-North	1. - SHGC = 0.44 2. - SHGC = 0.88 Shading Coefficient Per ASHRAE Fundamental +	1. - SHGC = 0.39 2. - N/A 3. - SHGC = 0.88 +	CLEAR
Fenestration Visual Light Transmittance	1. - VLT = 58% 2. - VLT = 35% +	1. - VLT = 58% 2. - VLT = 58% 3. - VLT = 35% +	CLEAR
Shading Devices	None	None	CLEAR
Interior Lighting Power Density (W/sf)	1.0 W/SF (Actual power density and 10% credit per Ashrae 90.1 Table G3.2)	Building Area Method 1.2 W/SF ASHRAE Table 9.5.1 (School)	CLEAR
			CLEAR



TABLE 1.4 - Comparison of Proposed Design Versus Baseline Design			
Model Input Parameter	Proposed Design Input	Baseline Design Input	
Daylighting Controls	Lighting in class room/office areas are controlled by occupancy sensors, single pole switches and daylight sensors. Corridors and common area +	None	CLEAR
Other Lighting Control Credits	EQ 6.1	None	CLEAR
Exterior Lighting Power (kW)	None	None	CLEAR
Process Lighting (kW)	None	None	CLEAR
Receptacle Equipment Power Density (W/sf)	1 Watt / SQ.FT. (Classroom/Office) 7 Watts / SQ. FT. (Computer Room)	1 Watt / SQ.FT. (Classroom/Office) 7 Watts / SQ. FT. (Computer Room)	CLEAR
			CLEAR
Primary HVAC System Type	HVAC System is a Geothermal Water Source Heat Pump system. Ventilation load and exhaust is accomplished with a 100% outside air roof +	Table G3.1.1B System # 6 - Packaged Rooftop Variable Air Volume / Direct Expansion / Electric Re-heat +	CLEAR
Other HVAC System Type	Building is equipped with a energy management system (EMS). This system allows us to see and control every function of the HVAC system +	Operating schedules are same as proposed building.	CLEAR
Fan Supply Volume	HRU-1 = 11,452 CFM HRU-2 = 4,080 CFM HRU-3 = 6,778 CFM +	AHU-1 = 11,728 CFM AHU-2 = 13,180 CFM AHU-3 = 30,079 CFM +	CLEAR
Fan Power	HRU-1 Supply Fan = 20 BHP HRU-1 Exhaust Fan = 5 BHP HRU-2 Supply Fan = 7.5 BHP +	Supply Fan Power - refer to ASHRAE 90.1 2004 G3.1.2.9	CLEAR
Economizer Control	Heat Pump section of HRU's will only energize when required. Utilization of outside air temperatures and heat wheel results in minimal +	None Climate Zone 4a - refer to ASHRAE 90.1 2004 Table G3.1.2.6A	CLEAR
Demand Control Ventilation	Yes, it applies to all Heat Recovery Units	None	CLEAR
Unitary Equipment Cooling Efficiency	HRU-1 = 15.8 EER HRU-2 = 14.9 EER HRU-3 = 14.4 EER +	9.5 EER - refer to ASHRAE 90.1 2004 Table 6.8.1	CLEAR
Unitary Equipment Heating Efficiency	HRU-1 = 4.4 COP HRU-2 = 5.0 COP HRU-3 = 4.4 COP +	3.1 COP - refer to ASHRAE 90.1 2004 Table 6.8.1	CLEAR
Chiller parameters	None	None	CLEAR
Chilled water loop & pump parameters	None	None	CLEAR
Boiler parameters	None	None	CLEAR
Hot water loop & pump parameters	None	None	CLEAR
Cooling tower parameters	None	None	CLEAR
Condenser water loop & pump parameters	(2) Pumps serve Heat Pump Loop, 841 GPM, 125 ft head, 40 hp, %78 Mechanical Efficiency with variable frequency drives +	None	CLEAR
			CLEAR



Section 1.5 - Energy Type Summary

List the energy types used by your project (i.e. electricity, natural gas, purchased chilled water or steam, etc.) for either the Baseline or Proposed design. Also describe the utility rate used for each energy type (i.e. Feswick County Electric LG-S), as well as the units of energy used, and the units of demand used. (Click "CLEAR" to clear the contents of any row):

TABLE 1.5 - Energy Type Summary

Energy Type	Utility Rate Description	Units of Energy	Units of demand	
Electricity	PECO Complex Rate	kWh	kW	<input type="button" value="CLEAR"/>
Natural Gas	PECO Natural Gas	therms	MBH	<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>
				<input type="button" value="CLEAR"/>

Energy Units:

- 1 kBtu = 1,000 Btu
- 1 kWh = 3,412 kBtu
- 1 therm = 100 kBtu
- 1 MBtu = 1,000 kBtu
- 1 MWh = 3,412 kBtu
- 1 ton hr = 12 kBtu

Demand Units

- 1 MBH = 1,000 Btu/h
- 1 kW = 3,412 MBH
- 1 MMBtuh = 1,000 MBH
- 1 ton = 12 MBH



Section 1.6 - On-Site Renewable Energy

If the project does not include on-site renewable energy, skip to Section 1.7

The project includes On-Site Renewable Energy

How is the on-site renewable energy cost calculated?

- This form will automatically calculate the *Renewable Energy Cost* based on the "virtual" energy rate from the proposed design energy model results. This form will subtract the *Renewable Energy Cost* from the proposed design energy model results to calculate the *Proposed Building Performance Rating*. (You do NOT need to fill out the "Renewable Energy Cost" field in Table 1.6 below)
- Renewable Energy Cost* for each on-site renewable source is analyzed separately from the energy model based on local utility rate structures. The *Renewable Energy Cost* for each renewable source is reported in Table 1.6 below, This form will subtract the reported *Renewable Energy Cost* from the proposed design energy model results to calculate the *Proposed Building Performance Rating*.
- On-site renewable energy is modeled directly in the energy model. *Renewable Energy Cost* is already credited in the proposed design energy model results (i.e. the energy model already reflects zero cost for on-site renewable energy, and this form will NOT subtract the *Renewable Energy Cost* a second time).aa

Indicate the on-site renewable energy source(s) used, the backup energy type for each source (i.e. the fuel that is used when the renewable energy source is unavailable - ASHRAE 90.1-2004, Section G2.4), the rated capacity for the source, and the annual energy generated from each source.

TABLE 1.6 - Renewable Energy Source Summary

Renewable Source	Backup Energy Type	Annual Energy Generated	Rated Capacity	Renewable Energy Cost	
					CLEAR
					CLEAR



Section 1.7 - Exceptional Calculation Measure Summary

(If the energy analysis does not include exceptional calculation methods, skip to Section 1.8)

The energy analysis includes exceptional calculation method(s) (ASHRAE 90.1-2004, G2.5)

How is the exceptional calculation measure cost savings determined?

This form will automatically calculate the exceptional calculation measure cost savings based on the "virtual" energy rate from the proposed design energy model results. This form will subtract this cost savings from the proposed design energy model results to calculate the *Proposed Building Performance Rating*.

Exceptional calculation measure cost for each exceptional calculation measure is analyzed based on local utility rate structures. The *cost savings* for each exceptional calculation is reported below, This form will subtract the reported exceptional calculation cost savings from the proposed design energy model results to calculate the *Proposed Building Performance Rating*.

For each exceptional calculation method employed, document the predicted energy savings by energy type, the energy cost savings (if option 2 above is selected), and a narrative explaining the exceptional calculation method performed, and theoretical or empirical information supporting the accuracy of the method. Reference any applicable Credit Interpretation Rulings. [Note: if an end-use has an energy loss rather than an energy savings, enter it as a negative number]

Exceptional Calculation Measure Short Description:

Energy Type(s)	Annual Energy Savings by Energy Type	Annual Cost Savings	Exceptional Calculation Measure Narrative:
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	

Exceptional Calculation Measure Short Description:

Energy Type(s)	Annual Energy Savings by Energy Type	Annual Cost Savings	Exceptional Calculation Measure Narrative:
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	



Section 1.8 - Performance Rating Method Compliance Report

In **Table 1.8.1**, list each energy end use for your project (including all end uses reflected in the baseline and proposed designs). Then check whether the end-use is a process load, select the energy type, and list the energy consumption and peak demand for each end-use for all four Baseline Design orientations. In **Table 1.8.1(b)** indicate the total baseline energy cost for each energy type for all four Baseline Design orientations. If either the baseline or proposed design uses more than one energy type for a single end use (i.e. electric resistance reheat, and central natural gas heating), enter each energy type as a separate end use (i.e. *Heating - Electric*, and *Heating, NG*).

Fill out the Proposed Design energy consumption and peak demand for each end use in **Table 1.8.2**. In **Table 1.8.2 (b)** indicate the total proposed energy cost for each energy type. [Note: Process loads for the proposed design must equal those listed in the Baseline design. Any process load energy savings for the project must be reported in Section 1.7.]

(Click "CLEAR" to clear the contents of any end use)

End Use	Process?	Baseline Design Energy Type	Units of Annual Energy & Peak Demand	Baseline (0° rotation)	Baseline (90° rotation)	Baseline (180° rotation)	Baseline (270° rotation)	Baseline Design	
Interior Lighting	<input type="checkbox"/>	Electricity	Energy Use (kWh)	268,233	268,233	268,233	268,233	268,233	<input type="button" value="CLEAR"/>
			Demand (kW)	76.5	76.5	76.5	76.5	76.5	
Space Heating	<input type="checkbox"/>	Electricity	Energy Use (kWh)	423,562	414,011	420,509	416,020	418,525.5	<input type="button" value="CLEAR"/>
			Demand (kW)	589.5	583	583.2	581.6	584.3	
Space Cooling	<input type="checkbox"/>	Electricity	Energy Use (kWh)	230,758	227,976	232,271	228,315	229,830	<input type="button" value="CLEAR"/>
			Demand (kW)	303.7	302.8	304.5	302.1	303.3	
Pumps	<input type="checkbox"/>	Electricity	Energy Use (kWh)	0	0	0	0	0	<input type="button" value="CLEAR"/>
			Demand (kW)	0	0	0	0	0	
Heat Rejection	<input type="checkbox"/>	Electricity	Energy Use (kWh)	0	0	0	0	0	<input type="button" value="CLEAR"/>
			Demand (kW)	0	0	0	0	0	
Fans - Interior	<input type="checkbox"/>	Electricity	Energy Use (kWh)	128,384	127,977	129,308	128,445	128,528.5	<input type="button" value="CLEAR"/>
			Demand (kW)	77.7	77.3	78.5	77.7	77.8	
Receptacle Equipment	<input checked="" type="checkbox"/>	Electricity	Energy Use (kWh)	235,598	235,598	235,598	235,598	235,598	<input type="button" value="CLEAR"/>
			Demand (kW)	67.2	67.2	67.2	67.2	67.2	
Site & Exterior Lighting	<input type="checkbox"/>	Electricity	Energy Use (kWh)	22,776	22,776	22,776	22,776	22,776	<input type="button" value="CLEAR"/>
			Demand (kW)	5.2	5.2	5.2	5.2	5.2	
Kitchen Equipment	<input checked="" type="checkbox"/>	Natural Gas	Energy Use (therms)	15,247	15,247	15,247	15,247	15,247	<input type="button" value="CLEAR"/>
			Demand (MBH)	465	465	465	465	465	
Lab Equipment	<input checked="" type="checkbox"/>	Natural Gas	Energy Use (therms)	6,338	6,338	6,338	6,338	6,338	<input type="button" value="CLEAR"/>
			Demand (MBH)	210	210	210	210	210	



Table 1.8.1 - Baseline Performance - Performance Rating Method Compliance

End Use	Process?	Baseline Design Energy Type	Units of Annual Energy & Peak Demand	Baseline (0° rotation)	Baseline (90° rotation)	Baseline (180° rotation)	Baseline (270° rotation)	Baseline Design
	<input type="checkbox"/>		Energy Use					CLEAR
			Demand					
	<input type="checkbox"/>		Energy Use					CLEAR
			Demand					
	<input type="checkbox"/>		Energy Use					CLEAR
			Demand					
	<input type="checkbox"/>		Energy Use					CLEAR
			Demand					
	<input type="checkbox"/>		Energy Use					CLEAR
			Demand					
Baseline Energy Totals:			Total Annual Energy Use (MBtu/year)	6,626	6,582	6,624	6,592	6,606
			Annual Process Energy (MBtu/year)					2,962

Note: Process Cost accounts for 20% of Baseline Performance. Process cost must equal at least 25% of Baseline Performance, or the narrative at the end of this form must document why this building's process costs are less than 25%

Table 1.8.1(b) - Baseline Energy Costs

Energy Type	Baseline Cost (0° rotation)	Baseline Cost (90° rotation)	Baseline Cost (180° rotation)	Baseline Cost (270° rotation)	Baseline Building Performance
Electricity	\$235,900	\$233,731	\$235,146	\$233,785	\$234,640
Natural Gas	\$37,139	\$37,139	\$37,139	\$37,139	\$37,139
Total Baseline Costs:	\$273,039	\$270,870	\$272,285	\$270,924	\$271,779

Table 1.8.2 - Performance Rating Table - Performance Rating Method Compliance

End Use	Process?	Proposed Design Energy Type	Proposed Design Units	Proposed Building Results	Baseline Building Units	Baseline Building Results	Percent Savings
Interior Lighting		Electricity	Energy Use (kWh)	223,528	Energy Use (kWh)	268,233	16.7 %
			Demand (kW)	63.8	Demand (kW)	76.5	16.9 %



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Table 1.8.2 - Performance Rating Table - Performance Rating Method Compliance

End Use	Process?	Proposed Design Energy Type	Proposed Design Units	Proposed Building Results	Baseline Building Units	Baseline Building Results	Percent Savings
Space Heating		Electricity	Energy Use (kWh)	56,265	Energy Use (kWh)	418,525.5	86.6 %
			Demand (kW)	211.1	Demand (kW)	584.3	63.9 %
Space Cooling		Electricity	Energy Use (kWh)	149,637	Energy Use (kWh)	229,830	34.9 %
			Demand (kW)	157.6	Demand (kW)	303.3	48.1 %
Pumps		Electricity	Energy Use (kWh)	163,825	Energy Use (kWh)	0	0 %
			Demand (kW)	28.2	Demand (kW)	0	0 %
Heat Rejection		Electricity	Energy Use (kWh)	0	Energy Use (kWh)	0	0 %
			Demand (kW)	0	Demand (kW)	0	0 %
Fans - Interior		Electricity	Energy Use (kWh)	53,228	Energy Use (kWh)	128,528.5	58.6 %
			Demand (kW)	20.5	Demand (kW)	77.8	74 %
Receptacle Equipment	X	Electricity	Energy Use (kWh)	235,598	Energy Use (kWh)	235,598	0 %
			Demand (kW)	67.2	Demand (kW)	67.2	0 %
Site & Exterior Lighting		Electricity	Energy Use (kWh)	22,776	Energy Use (kWh)	22,776	0 %
			Demand (kW)	5.2	Demand (kW)	5.2	0 %
Kitchen Equipment	X	Natural Gas	Energy Use (therms)	15,247	Energy Use (therms)	15,247	0 %
			Demand (MBH)	465	Demand (MBH)	465	0 %
Lab Equipment	X	Natural Gas	Energy Use (therms)	6,338	Energy Use (therms)	6,338	0 %
			Demand (MBH)	210	Demand (MBH)	210	0 %
			Energy Use		Energy Use		0 %
			Demand		Demand		0 %
			Energy Use		Energy Use		0 %
			Demand		Demand		0 %
			Energy Use		Energy Use		0 %
			Demand		Demand		0 %
			Energy Use		Energy Use		0 %
			Demand		Demand		0 %
			Energy Use		Energy Use		0 %
			Demand		Demand		0 %
			Energy Use		Energy Use		0 %
			Demand		Demand		0 %
Energy Totals:			Total Annual Energy Use (MBtu/year)	5,246		6,606	20.6 %
			Annual Process Energy (MBtu/year)	2962		2,962	0 %



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LEED for Schools 2007 Submittal Template
EA Credit 1: Optimize Energy Performance

Table 1.8.2(b) - Energy Cost and Consumption by Energy Type - Performance Rating Method Compliance										
Energy Type	Proposed Design			Baseline Design			Percent Savings			
	Energy Use		Cost	Energy Use		Cost	Energy Use	Cost		
Electricity	904,857	kWh	\$143,862	1,303,490	kWh	\$234,640	30.6	%	38.7	%
Natural Gas	21,585	therms	\$37,139	21,585	therms	\$37,139	0	%	0	%
	0			0			0	%	0	%
	0			0			0	%	0	%
Subtotal (Model Outputs):	5,246	(MBtu/year)	\$181,001	6,606	(MBtu/year)	\$271,779	20.6	%	33.4	%
On-Site Renewable Energy	Energy Generated		Renewable Energy Cost							
Exceptional Calculations	Energy Savings		Cost Savings							
Total:	Proposed Design			Baseline Design			Percent Savings			
	Energy Use		Cost	Energy Use		Cost	Energy	Cost		
	5,246	(MBtu/year)	\$181,001	6,606	(MBtu/year)	\$271,779	20.6	%	33.4	%



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DOCUMENTATION DESCRIPTION LOG

Please upload the compliance summaries for ASHRAE 90.1-2004 (or qualifying local energy code) and/or LEED if available from the energy simulation software used. Please also upload the energy rate tariff from the project's energy providers if the project is not using the default rates in the LEED-NC v2.2 Reference Guide.

If the software is incapable of producing the energy code or LEED compliance summaries please provide output summaries and example input summaries for both the baseline and proposed buildings that support the data entered in the template tables above.

* Output summaries must include simulated energy consumption by end use as well as total building energy consumption and cost by energy type used in the building.

* Example input summaries must be a sampling of model input assumptions, focusing on the most common systems present in the building. The example input summaries should be taken from the simulation software's standard input reports if available; if the software will not produce input summary reports then screen captures of representative inputs are acceptable. The example input summaries must include samples of the following input information:

1. Occupancy and usage patterns
2. Assumed envelope component sizes and traits (area, R-value, U-value, etc.)
3. Assumed mechanical equipment types and traits (capacity, efficiency, etc.)

Please note that uploaded documents should be SUMMARIES, and not large quantities of detailed data

Documentation Description Log

In the text box below, please reference the file name of each uploaded file (e.g. simulationsummary.pdf)

EA Credit #1 Optional Narrative.pdf
PECO Electric Rate.pdf
PECO Gas Rate.pdf
Proposed Building Energy Simulation.pdf
Baseline Building Energy Simulation.pdf
Energy Simulation Calculations.pdf



I have provided the appropriate supporting documentation in the document upload section of LEED Online. Please refer to the above sheets.



NARRATIVE (Optional)

Please provide any additional comments or notes regarding special circumstances or considerations regarding the project's credit approach.

It appears the template is not properly calculating the process energy percentage. When manually calculated the process energy accounts for nearly 45% of the energy consumed.

Heating Savings Narrative:

Geothermal systems are on average 400%-500% more efficient in the heating mode then electric reheat systems. This is because geothermal systems are required to purchase 1 unit of electricity to pump for units of heat from the ground resulting in 5 units of heat. Electric reheat is purchasing 1 unit of electricity to provide 1 unit of heat and is 100% efficient. This is also noted as coefficient of performance (COP). The additional savings are based on the high rate of ventilation and the proposed system being modeled with high efficient sensible heat recovery wheels.

The project is seeking point(s) for this credit using an alternate compliance approach. The compliance approach, including references to any applicable Credit Interpretation Rulings is fully documented in the narrative above. *(Indicate the number of points documented in the "Alternative Compliance Points Documented" field below).*

Alternative Compliance Points Documented

Project Name: New Kensington CAPA High School

Credit: EA Credit 1: Optimize Energy Performance

Points Documented: 7

READY TO SAVE THIS TEMPLATE TO LEED-ONLINE? Please enter your first name, last name and today's date below, followed by your LEED-Online Username and Password associated with the Project listed above to confirm submission of this template.