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Renewable Energy Offset Requirements Form

Energy use by swimming pools, spas, and other exterior equipment requiring a building permit such as snow and ice melt systems, patio heaters, outdoor kitchens, and similar outdoor features, must be offset by on-site renewable energy generation equivalent to the energy used. All spas must have an insulated cover.

Exception: Swimming pools equipped with all of the following equipment do not need to offset their energy use by on-site renewable energy sources: solar thermal heating systems (without the use of fossil fuels), high-efficiency two-speed or multi-speed pumps, cartridge filter systems, and an automatic cover.

Use the Energy Usage and Renewable Energy Offset Worksheets on the back of this form to calculate the annual energy usage in BTUs to complete the Renewable Energy Offset Requirements Form.

1	Indoor Swimming pool BTU usage per year	1			
2	Outdoor Seasonal Swimming pool BTU usage per year	2			
3	Pool Pump BTU usage per year (if required)	3			
4	Spa BTU usage per year	4			
5	Ice Melt System BTU usage per year	5			
6	Patio Heater BTU usage per year	6			
7	Outdoor Kitchen BTU usage per year	7			
8	Outdoor Gas Fireplace BTU usage per year	8			
9	Other:	9			
10	Other:	10			
11	Add lines 1 through 10 for total BTU usage per year			11	
12	On-site Photovoltaic energy produced in BTUs per year	12			
13	On-site Solar Thermal energy produced in BTUs per year	13			
14	Heat Pump energy offset in BTUs per year (per supplier)	14			
15	Add lines 12 through 14 for total renewable energy offsets in BTUs per year			15	
16	If line 15 is less than line 11, subtract line 15 from line 11 and enter the difference.			16	

Please describe any other appliance listed above:

Other Appliance Description:

Swimming Pool, Spa, & Other Exterior Equipment Energy Usage Calculation Worksheets

Indoor Pool Energy Usage Calculation Worksheet:

This calculation is based on 12 months per year uasge, heated at a maximum of 82˚F.

Multiply the surface area of the pool in square feet by 116,000 BTU's to get the annual energy use in BTUs.

Enter the Indoor Pool Surface Area in Square Feet	Sq. Ft.
Multiply the indoor pool surface area square footage by 116,000 BTUs	x 116,000
Enter the total on line 1 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Seasonal Outdoor Pool Energy Usage Calculation Worksheet:

This calculation is based on 3 months per year usage, heated at a maximum of 82˚F.

Multiply the surface area of the pool in square feet by 29,000 BTU's to get the annual energy use in BTUs.

Enter the Indoor Pool Surface Area in Square Feet	Sq. Ft.
Multiply the indoor pool surface area square footage by 29,000 BTUs	x 29,000
Enter the total on line 2 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Pool Pump Energy Usage Calculation Worksheet:

If a Pool does not have an automatic cover, a multi-stage pump, and a cartridge filter, the pump's energy usage also needs to be included as annual pool energy usage.

Enter the annual estimated hours of use of the Pool Pump.	Hours of Use
Enter the BTU per hour rating found on the pool pump name plate and multiply by the estimated hours of use.	BTU per hour Rating
Enter the total on line 3 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Spa Energy Usage Calculation Worksheet:

All spas must have an insulated cover.

Multiply the surface area of the Spa in Square Feet by 430,000 BTU's to get the annual energy use in BTUs.

Enter the Spa Surface Area in Square Feet	Sq. Ft.
Multiply the spa surface area square footage by 430,000 BTUs	x 430,000
Enter the total on line 4 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Note: The renewable energy to offset a seasonal pool may be produced over 12 months.

Ice Melt Systems Calculation Worksheet

Multiply the Square Feet of heated area by 34,425 BTU's to get the annual energy use in BTUs.

Enter the ice melt systems heated area in Square Feet.	Sq. Ft.
Multiply the ice melt systems heated area square footage by 34,425 BTUs	x 34,425
Enter the total on line 5 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Other Exterior Energy Usage Calculation Worksheet:

External energy usages for appliances such as patio heaters, outdoor kitchen, outdoor gas fireplace, etc. Please see appliance name plate for BTU per hour rating. Multiply the appliance BTU per hour rating by the estimated hours of use per year to get the annual energy use in BTUs.

Enter the annual estimated hours of use of an exterior appliance.	Hours of Use
Enter the BTU per hour rating found on the appliance name plate and multiply by the estimated hours of use.	BTU per hour Rating
Enter the total on lines 6 through 10 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Renewable Energy Production Calculations

Photovoltaic Systems Energy Production Worksheet:

Multiply the total KWH per year produced by your photovoltaic system by 3,412 to convert to BTU's per year.

Enter the total KWH per year produced by your photovoltaic system	KWH per year
Multiply the total KWH per year by 3,412 to convert KWH to BTU's per year	x 3,412
Enter the total on line 12 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Solar Thermal Energy Production Worksheet:

Indicate the number and output of solar thermal panels you will provide to offset the necessary BTU's per year.

Number of Solar Thermal Panels you will provide	Solar Thermal Panels
Multiply Number of Panels by the energy output of each panel per year	x
Enter the total on line 13 of the Renewable Energy Offset Requirements Form	Total BTUs per year

Heat Pump

Heat Pump (for seasonal swimming pools) air source heat pumps and ground source heat pumps, please attach worksheet prepared by system supplier with system specifications necessary to offset the required BTU's per year and enter the offset total on line 14 of the Renewable Energy Offset Requirements Form.