



Suggested Environmental Considerations for Boilers

The suggested environmental considerations below can be used in RFPs or RFIs to identify opportunities for products that are environmentally preferable and/or contribute to LEED credits.

Suggested Question	Preferred Answer	Definition	Rationale
Is this a chemical-free boiler system? (Yes/No)	Yes		Chemical-free systems can reduce operations and maintenance costs by eliminating the need to purchase water treatment chemicals on a regular basis. They also reduce the quantity of potentially toxic and/or hazardous chemicals housed on-site. Many systems on the market offer chemical-free technologies
Can this product be configured to operate as a closed-loop system? (Yes/No)	Yes		Closed-loop systems reuse process water many times, drastically increasing water efficiency over once-through systems.
Is this product installed with a tempering device for blow down water? (Yes/No)	Yes	To avoid boiler problems, water must be periodically discharged or "blown down" from the boiler to control the concentrations of suspended and total dissolved solids in the boiler. Surface water blowdown is often done continuously to reduce the level of dissolved solids, and bottom blowdown is performed periodically to remove sludge from the bottom of the boiler	Tempering devices reduce the amount of cold water injected into the boiler blow down water to meet water temperature requirements for wastewater.
Is assessment equipment permanently installed on the boiler steam trap? (Yes/No)	Yes		According to the U.S. EPA, leaky steam traps account for the loss of close to 20% of the steam generated by typical boilers. Boilers with permanently installed monitoring equipment can be connected to the building management system, ensuring that leaks are identified as soon as they occur

Does this product meet the minimum efficiency requirements for commercial boilers outlined by the U.S. Federal Energy	Yes	The U.S. Federal Energy Management Program (FEMP) designates mandated efficiency requirements for federal purchases. Available at: https://www1.eere.energy.gov/femp/	Efficient boilers reduce operating costs by reducing both energy and water use.
Does this product have the capacity for water temperature reset? (Yes/No)	Yes	A boiler reset control is a device that automatically controls the boiler water temperature according to a software program based on outdoor temperature.	This technology improves efficiency by automatically setting the supply water to a lower temperature at reduced heat loads.
Does this product have the capacity to modulate the burners?	Yes	Modulating burners are designed to control the burner output (size of flame) to match the boilers variable load requirement, during this process.	Modulating boilers can operate at part load. This capability improves efficiency by allowing the boiler to vary heat output based on demand.
Is this a low mass boiler? (Yes/No)	Yes		Low mass boilers cycle on and off more quickly than high mass boilers. It is therefore not necessary to keep the boiler on hot standby during periods of reduced load.
Can this product be configured to provide precise air-fuel ratio control? (Yes/No)	Yes		Boiler efficiency can be optimized by linking air-fuel control sensors to the building management system.
Can this product be configured for optimum start control? (Yes/No)	Yes		This technology allows facility managers to fire up the boiler each morning immediately before the building is occupied.

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