

Case Study

Office Campus



Overview: At The Gates Foundation Campus in Seattle, a combination of energy saving lights, natural ventilation, occupancy sensors, and efficient mechanical and plumbing systems work together to produce a savings of 40% of energy consumption compared to similar buildings. A large part of the energy savings (37% energy reduction to be exact) is due to 47 Apricus Evacuated Tube Solar Collectors installed on the building's roof feeding two 1,000 gallon storage tanks. The system utilizes the sun's energy to preheat the hot water supply servicing the cafeterias and bathroom facilities using 1,300 - 7,500 gallons of hot water daily. Offsetting natural gas, the system is able to save the burning of 4,750 therms per year of natural gas.



The investment for the building's energy efficient technologies, including the Apricus solar hot water system, are expected to be recovered after just 30 years of operation. Those at the foundation are impressed with the system's performance and thrilled to be able to use solar energy cost-efficiently in the cloudy Pacific Northwest.

The building received Platinum LEED certification from the US Green Building Council in October 2011.



Images courtesy of the Bill & Melinda Gates Foundation.

Contact Information:

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Project Description:

Property Name:	The Gates Foundation
Location:	Seattle, WA USA
Building Use:	Office Building Campus
Array Size:	47 Apricus AP-30 Collectors
Average Daily Output:	73 kw / 230,000 Btu/hour
System Type:	Drainback

Apricus APSE-30:

Physical Specifications:

Dimensions:	2.0m x 2.2m / 78.9" x 86.4"
Aperture Area:	2.98m ² / 32.05ft ²
Gross Area:	4.15m ² / 44.76ft ²
Gross Dry Weight:	95kg / 209lb
Fluid Capacity:	710ml / 24 fl oz
Max Pressure:	800kPa / 116psi

Materials of Construction:

Evacuated Tubes:	Borosilicate 3.3. Glass
Absorber Coating:	Aluminum Nitrate
Heat Pipes:	High Purity Copper
Mounting Frame:	439 Stainless Steel
Manifold Casing:	5005-H16 Anodized Aluminum

Warranty:

Manifold & Frame:	15 years
Tubes & Heat Pipes:	10 years