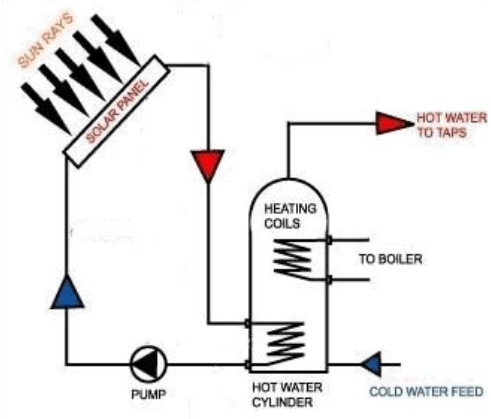
RESOURCE
INTERNATIONAL, LTD.
ENGINEERS • SCIENTISTS • SURVEYORS • PLANNERS
P.O. BOX 6160 • 9560 KINGS CHARTER DRIVE • ASHLAND, VA 23005
(804) 550-9200 • FAX (804) 550-9259

# SOLAR HOT WATER SYSTEM

## Resource Engineers Solar Hot Water System

Resource International, LTD. (Resource) is providing engineering support for the design of a solar hot water system at the St. Brides Correctional Facility in Chesapeake, Virginia. Working in support of Johnson Controls, Inc.'s contract with the Department of Corrections, Resource has provided mechanical, process and structural design support.




**A typical solar hot water system schematic**

The system is being designed to provide solar heated potable hot water for showers and other domestic uses at the facility. Collectors will be mounted on three (3) separate buildings. A total of 252 solar panels (40 sq ft each), providing about 10, 080 sq ft. of solar collection area will be used to collect solar energy. The system uses water as the heat collection fluid to maximize collection efficiency. The system will also use "drain down" technology to protect the collectors from freezing when collector temperatures reach cold weather set points. The heated water will be stored in insulated tanks that will supply heated make up water to the propane hot water heaters reducing the fuel demand normally required to heat cold water.

Key design elements provided by Resource were details for the roofing penetrations, roof support systems, access, cold weather drainage, and the avoidance of prisoner areas. Resource assisted the Johnson process engineers in revising the number and locations of the systems in their original design in order to have identical heat exchange units, and to locate connection points for best use of existing piping. The facility is scheduled for a 2012 startup.

For more information please contact:
Mr. Charles D. Riedlinger, P.E. at (804) 550-9206 or
Mr. Meredith Winn at (804) 550-9243

***http://www.resourceintl.com/***