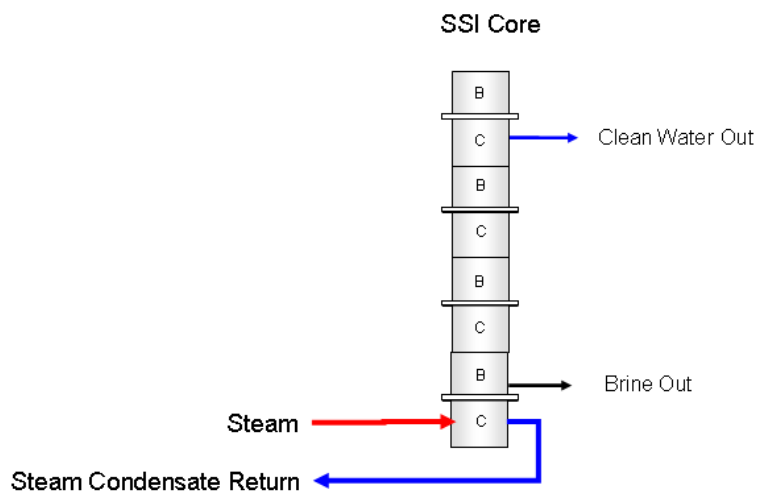


SSI Energy Source Flexibility

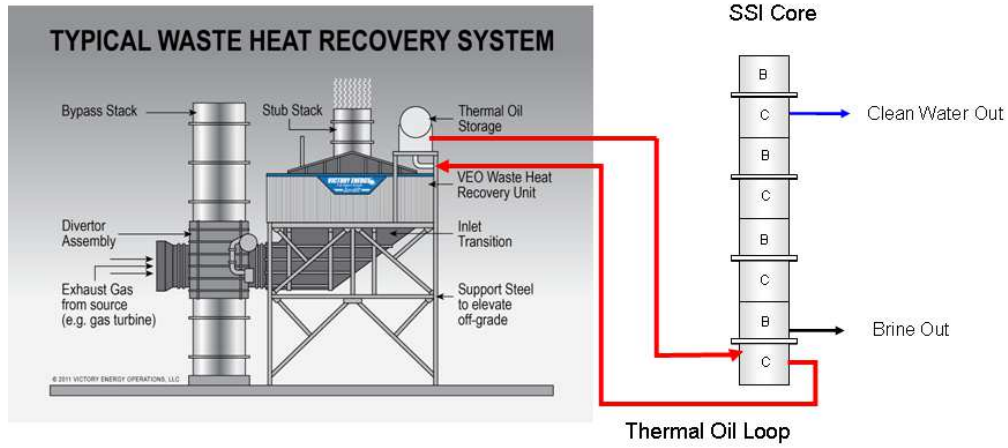
A key benefit of SSI's technology is access to a broader range of energy sources. SSI's proprietary thermal transfer mechanisms allow capture and use of essentially any form of thermal heat for use by the SSI Core, including industrial waste heat ("recoverable energy"), solar, and geothermal. While conventional thermal systems may make use of heat sources such as waste heat by use of HRSGs (heat recovery steam generators), SSI's thermal transfer mechanism can capture such forms of heat with less loss by more directly tapping into the heat source. Such losses from current, conventional technologies can be considerable, particularly if electricity is the dominant energy source required for water treatment (as in the case of RO or MVC evaporators).

The distillation energy for the SSI Core enters the bottom-most stage of the Core. In the current SSI Pilot Unit this distillation energy is in the form of LP steam, however it could as easily be flue gas or other fluid that meets the heat requirements of the Core.

This is the Core configuration when powered by LP steam:

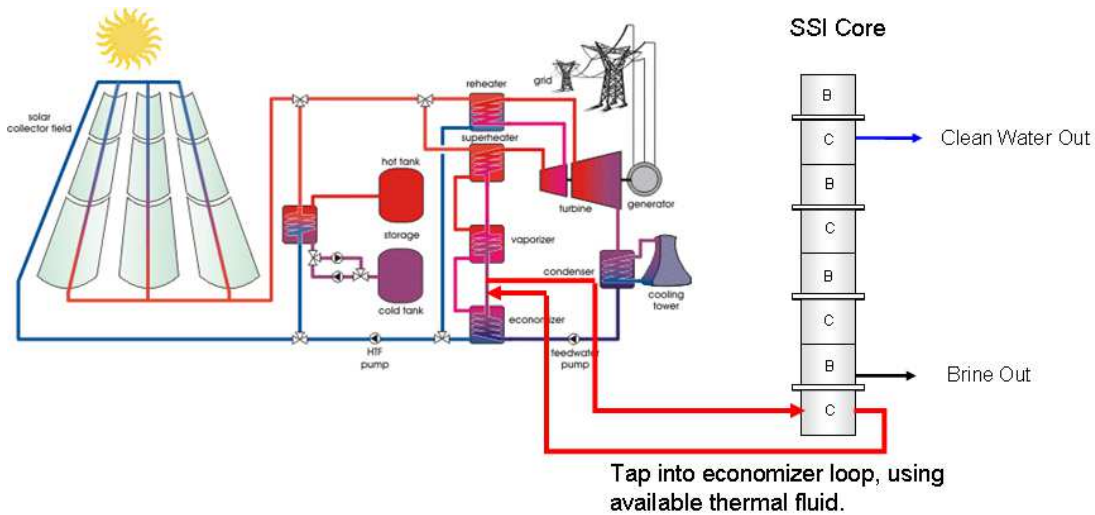


One potential configuration to capture flue gas using existing flue gas capture equipment taps directly into the thermal fluid stream:

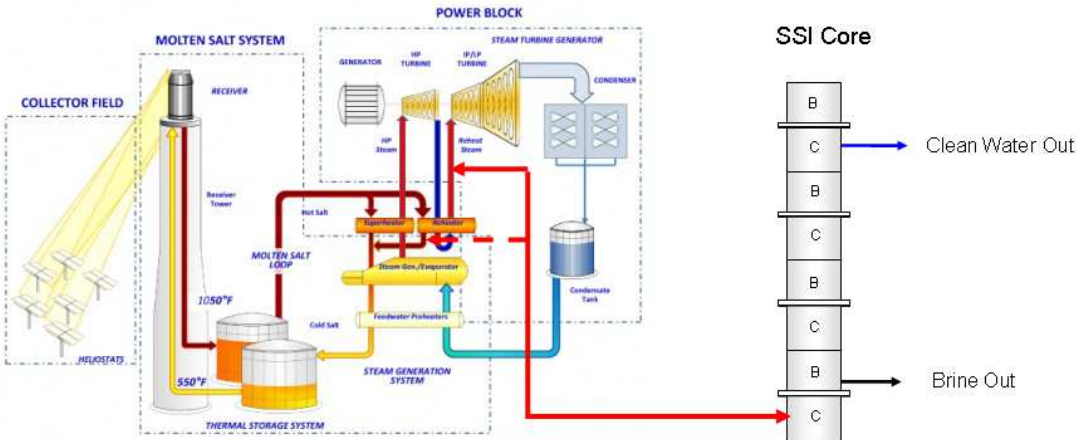


Solar Power Examples

In a configuration where solar (thermal) power is available, the SSI Core may be connected directly into the solar heating circuit, significantly reducing any conversion losses. Two examples are shown, first a solar concentrating trough array:



In a solar tower plant, the SSI Core is configured as shown:



There are multiple tap points in this configuration, typical is in the reheater loop.