

News - Chementator

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...and this process makes power from waste heat

By Chemical Week Editorial Staff

WOW Energy (see item above) has also developed a patented process that uses commercial, off-the shelf components to reduce the FG temperature to near ambient, while converting the extracted thermal energy into electricity. The cascading closed-loop cycle (CCLC) does this by using a hydrocarbon (propane) working fluid in a closed-loop evaporating and condensing system with radial turbo-expanders in a cascading combined-cycle arrangement (flowsheet). The exhaust heat from the first turbo-expander is recovered and used to drive a second turbo-expander in a combined-cycle arrangement.

The costs of CCLC are comparable to that of other heat-recovery technologies, says Stinger. But, because CCLC has a higher heat-transfer efficiency, lower maintenance costs, reduced water consumption and the ability to capture lower temperature heat, "attractive" financial returns are expected, he says. Several projects are at various stages of development and design, and the first commercial demonstration of CCLC — which may include a FFGC system — is expected by the end of the year.