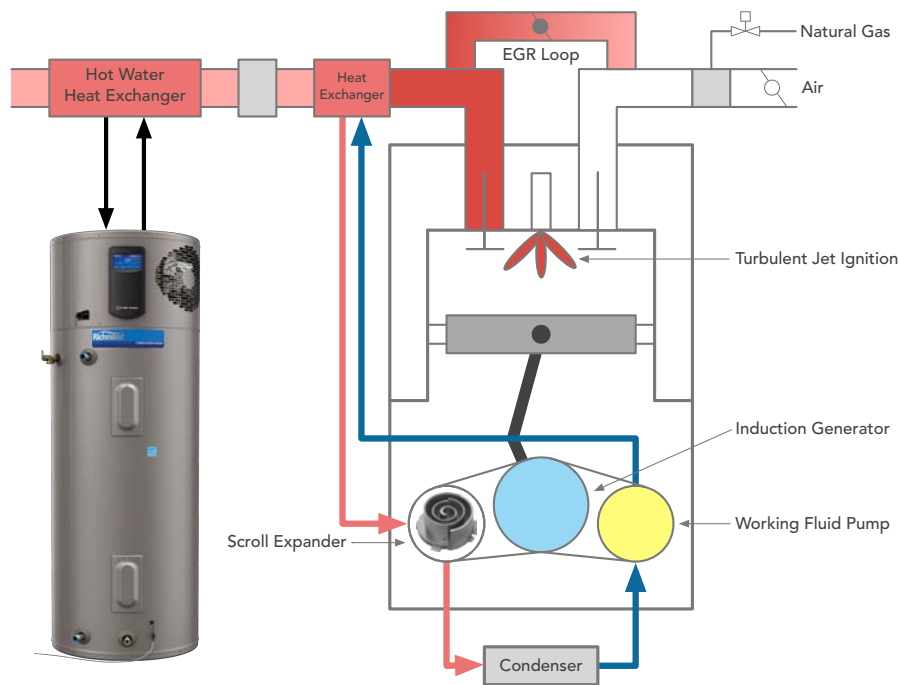


Spark Assisted Compression Ignition (SACI) 1 kW_e Generator System with Integrated Waste Energy Recovery (WER)

The 1 kW SACI-WER GENSET: A pathway to 40% fuel-electricity efficiency at \$3,000 US



STRATEGY

TARGET

STRATEGY	TARGET
1 Compression Ratio Increase from 8:1 to 14:1	Increase BTE from 26% to > 29%
2 EGR Dilution with Stoichiometric SACI Combustion and Turbulent Jet Ignition	Increase BTE from 29% to > 35%
3 WER with Bottoming ORC	Increase BTE from 35% to > 41%
4 COTS Induction Generator Efficiency 96% - 98%	Achieve Fuel-to-Electric Efficiency > 40%