**Objective:** To demonstrate a peak brake thermal efficiency of 45% on a light duty diesel engine/organic Rankine cycle combined system

Substantial increases in engine efficiency require utilization of the waste energy found in the coolant, EGR, and exhaust streams.

Radial inflow turbine with integrated generator developed by Barber-Nichols

A simple Rankine cycle was operated using the exhaust heat as input to the cycle.

The net cycle output of 4 kW, combined with the engine output of 66 kW yielded a combined efficiency of 45%.