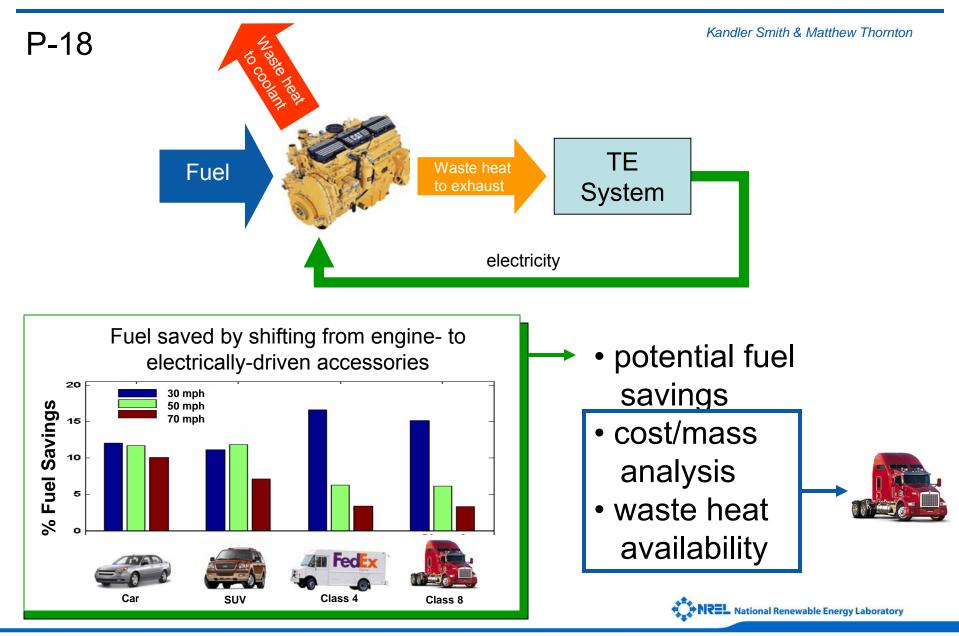
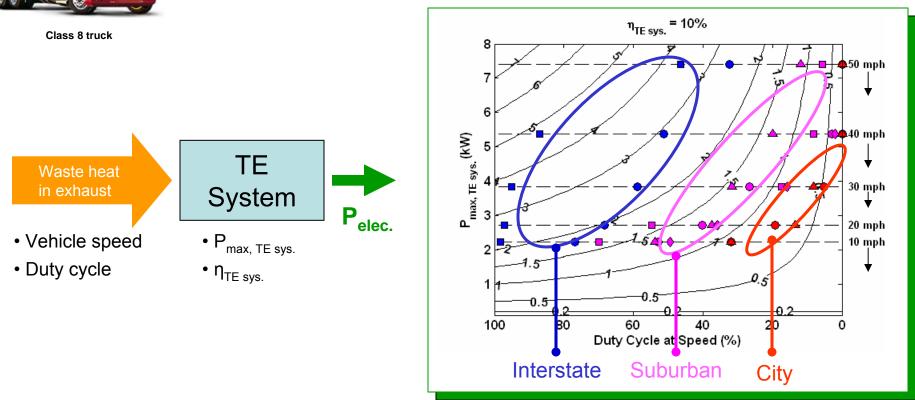


## Feasibility of Onboard Thermoelectric Generation for Improved Vehicle Fuel Economy





## Electrical power generated depends on driving cycle, thermoelectric system size & efficiency



For Class 8 trucks, this steady-state, warm-start analysis found:

Present (5-10% eff.): Electrical output comparable to alternator → 1-3% fuel savings
Future (15% eff.): Electrical output driving ~½ of accessories → 2-9% fuel savings

REL National Renewable Energy Laboratory