Characterization of Dual-Fuel Reactivity Controlled Compression Ignition (RCCI) Using Hydrated Ethanol and Diesel Fuel

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- Ethanol has potential to reduce CO_2 and dependence on foreign oil.
- The majority of the energy input to produce ethanol is spent in water removal (distillation & dehydration), which is extremely non-linear.
- Dual Fuel Reactivity Controlled Compression Ignition (RCCI) shows promise as an avenue to utilize hydrated ethanol as a fuel, where conventional combustion regimes could not.

75% by Volume Ethanol & Diesel RCCI Combustion