54.5 MPG? No need to trade lives for fuel economy.

BLOOMFIELD, Conn – January 23, 2012 – LiquidPiston, Inc. – The Obama administration wants auto makers to lift the fleet average gas mileage of new cars and trucks to 54.5 miles per gallon by 2025. The only way to meet these regulations using conventional piston engines is to reduce vehicle weight. Although cars in all weight classes continue to get safer using new designs and materials, numerous studies as well as common sense indicate that the odds of surviving a collision in a heavy, full-size car or SUV are nearly double that of a light, compact car.

While great progress is being made in electric vehicle technology it will be many years before electric vehicles and the charging infrastructure required to support them become mature enough to satisfy the needs, budget, and preferences of most consumers. As a result, the internal combustion engine is likely to power the majority of all cars on the road for decades to come.

Over the course of the last 100 years, the efficiency, durability, and emission control properties of conventional piston engines have improved dramatically, reaching the point where they are facing theoretical limits. Any incremental gains will be small and expensive, potentially adding thousands of dollars to the price of a new car. Only a new engine architecture offers the fundamental breakthroughs required to significantly raise theoretical efficiency limits, allowing for the design of 100 mile per gallon cars without sacrificing safety, comfort, or economy.

High Efficiency Hybrid Cycle (HEHC) engines can provide exactly that breakthrough. By coupling constant volume combustion of slow-burning diesel fuel with Atkinson over-expansion, skip-cycle firing, and engine heat harvesting, HEHC engines can achieve levels of thermodynamic efficiency that are simply impossible for piston engines, including the latest generation Opposed Piston Opposed Cylinder (OPOC) designs. HEHC engines are also inherently lighter, smaller, and less expensive to manufacture, with many fewer moving parts than conventional piston engines.

What HEHC engines lack is maturity. Many years of effort and many millions of dollars in investment lie ahead before HEHC engines can match the durability, reliability, and emission controls of conventional piston engines. But if we are to meet the President’s 2025 goal, we need to start now.

LiquidPiston is a New England based venture capital backed start-up that designs HEHC engines. While initially targeted for sub 100 horsepower generator and auxiliary power unit applications, LiquidPiston welcomes inquiries from manufacturing partners interested in exploring primary automotive propulsion. Come visit our labs and see for yourself. Together, we can build a greener world.

About LiquidPiston
LiquidPiston, Inc. develops rotary internal combustion engines based on an innovative thermodynamic cycle, increasing average-load efficiency to above 50%, which reduces fuel consumption by as much as threefold over conventional engines. LiquidPiston engines are quiet, compact and powerful, with a lower total carbon footprint for environmental sustainability. To learn more, visit www.liquidpiston.com.

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