

ePower hires John Petersen as executive vice president, CFO

John Petersen — better known to *Batteries International* readers as our resident curmudgeon — has joined ePower Engine Systems as its executive vice president.

Petersen, a lawyer and accountant with over three decades of corporate finance experience, is also chief financial officer of the firm, which has developed, an engine-dominant diesel-electric hybrid drivetrain for long-haul heavy trucks.

Petersen started immediately.

The appointment comes at a critical moment in ePower's development, which Petersen says is poised for rapid growth. "ePower has developed an engine-dominant diesel-electric series hybrid drivetrain that could become a gold standard for the trucking industry," he says.

"Compared to the current US average fuel economy of 6 miles per gallon for heavy trucks, the 8.1 mpg ePower's second-generation prototype logged at highway speeds in rolling hills with a 5 ton to 15 ton payload is amazing. There's a good chance we'll see double digit numbers with a 20 ton payload when the ePower team finishes work on its third-generation prototype in November.

"My task will be to manage the corporate finance, government and industry relationships that will drive ePower's growth. It's great to be involved with a cheap fuel conservation solution for a global industry like trucking that burns over a hundred billion gallons of fuel per year and emits over a gigaton of CO₂."

ePower's CEO Jay Bowman, the driving force behind the technical team,



The converted truck with battery boxes mounted on the outside, immediately behind the steps to the cab

explains: "We took a very different approach to heavy truck hybridization because we know you can't really cut fuel use without reducing engine size.

"Several OEMs offer parallel hybrids that save 20% to 30% in urban duty cycles, but only save 8% to 12% in long-haul duty cycles because they all use big engines.

"While our series hybrid uses a 240 hp diesel engine running at steady speed, the change from a mechanical drivetrain to a series electric drivetrain gives us twice the torque of a big engine.

"The result is quicker acceleration and better drivability because our integrated cruise control and automatic transmission take driver skill out of the equation. Our batteries are primarily used for high-speed acceleration, recuperative braking and climbing modest grades."

ePower's team took four

years, using off-the-shelf components, to build a drivetrain that beats the EPA's 2017 fuel economy and emissions targets. The biggest challenge, according to Bowman, "was finding a cost-effective battery that could stand up to regenerative braking currents that regularly top 200A and 900V."

This year ePower decided to use the PbC battery from Axion Power International, a lead-carbon hybrid that delivers an optimal mix of energy and power for ePower's application. Bowman said, "I couldn't have created a better battery for our series hybrid drive if I'd written the specs myself."

If ePower generates reasonable interest from fleet operators, its price premium compared to a conventional drivetrain should be in the \$45,000 range — an 18 to 24 month payback.

Petersen has a long histo-

ry in the energy and energy storage business.

From 2004 through 2007, he was Axion's board chairman and worked as its general counsel. In those positions, he was actively involved in a series of financing transactions that raised over \$40 million in equity for Axion.

Over the past five years, Petersen has earned a global following in the energy storage and electric vehicle sectors. In addition to his writing for this magazine, he frequently appears as a speaker at battery conferences and institutional investor events.

When we asked Petersen why he took a job in industry after 20 years on his own, he said, "If ePower's engine-dominant series hybrid is widely adopted, it could slash fuel consumption in the trucking sector by 30 billion gallons a year.

"That's a legacy worth working for." 🚚