

# Environment, engines drive Babbitt

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Czero Inc. sees the potential in stopping trucks in their tracks — potential savings from potential energy, that is.

The Fort Collins-based research and development consulting company is currently working on the third generation of its hydraulic hybrid retrofit for trucks in the higher class range, such as delivery and refuse collection trucks.

Czero's system works by pressurizing fluid in a tank as the truck comes to a stop, and then releasing the built-up pressure to get the truck moving again. Guy Babbitt, co-founder and president of Czero, sees a "realistic" 20 percent savings in fuel costs, but said the new system could push that to 30 percent. Babbitt noted other benefits, too.

"Extended brake life could exceed savings in fuel with a two- to three-year payback," Babbitt said.

Although the hydraulic hybrid is not a new idea, developing a retrofit kit is something different. Right now, Babbitt feels truck makers are only interested in putting hybrids in new vehicles, but he believes a fleet of trucks could be retrofitted for the cost of a new truck and the hybrid add-on alone.

Since relocating from Colorado Springs in 2007 to join the Northern Colorado Clean Energy Cluster, Babbitt has balanced the company's own product development work with consulting. The firm has been involved in the research and development of growth systems for Solix Biofuels, and worked with VanDyne Superturbo on a dynamometer test facility, fuel cooling system, and control module.

From an early age it was evident that Babbitt would wind up in the engineering field. "I was the kid that took the toaster apart," he said. "It was just clear that I'd be an engineer."

He also developed his passion for the environment — and working on cars — young. For Babbitt, engines were a "place you could get the biggest impact."

When Czero started working on outboard engines for a watercraft company, some questioned how the firm could still consider itself "green." Babbitt felt that since people were going



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to buy those engines anyway, why not try to make them better? That sentiment is a driving force for Czero.

"We want to be integral, give back to the community," Babbitt said. "It's not about us."

For the future, Babbitt wants to know how Czero can think bigger. "How can we use our skills to get stable and strong enough to devote time to others?"

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**Guy Babbitt**  
*Czero Inc.*



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