Project Overview:
In this project, Vanner Inc. (Hilliard, OH) and The Ohio State University (OSU) plan to collaborate to improve the value proposition of hybrid technology by developing improved power conversion systems.

Problem Statement:
Existing hybrid technology for commercial vehicles offers as much as a 15% improvement in fuel economy, but carries a large price premium. To make this a cost effective option from a fleet perspective it is imperative to further improve fuel economy.

Solution:

1. Establish power electronics test chamber for vehicles at CAR.
2. Participate in the design of a new generation of DC/DC and DC/AC Converters for commercial vehicles.

Fig. 1 Estimate decrease in fuel consumption caused by electrification of vehicle accessories

Fig. 2 The overall structure of the proposed power conversion system in commercial vehicles