



ISE Contact: Gary Willms  
(858) 413-1736  
[gwillms@isecorp.com](mailto:gwillms@isecorp.com)

Siemens Contact: Michael Krampe  
(770) 751-4959  
[michael.krampe@siemens.com](mailto:michael.krampe@siemens.com)

## **ISE Corporation and Siemens Announce New High-Power Drive System for High-Performance Articulated Buses**

SAN DIEGO, Calif., Sept. 26, 2005 — ISE Corporation and Siemens announced today the development of a new high-power drive system for high-performance 40 and 60 foot articulated buses. The new system will be comprised of new motors, inverters, and generators from Siemens and high-power gasoline and diesel engine systems, high-efficiency accessories and advanced controls from ISE. The combination of high-efficiency electrical components from Siemens and ISE's proprietary systems and controls is expected to provide system efficiencies and corresponding bus fuel economies that are unparalleled in the industry.

Siemens will be developing a new line of high-efficiency motors, inverters, and generators as a base for the new drive system. The new 260 kilowatt motor will be a permanent magnet design with extremely high torque density. The motor will be capable of directly driving even 60 foot buses without gearing. The new inverters will be about 30 percent smaller than the current design and they will also be capable of managing nearly 5 percent greater power than the current design. In addition, the inverters will support advanced features for the precise and safe control of permanent magnet motors. The new 240 kilowatt generator will also be a highly efficient, permanent magnet configuration which is specifically designed to be driven by both gasoline and diesel engines.

“One of the main objectives of the Siemens-ISE partnership is to provide the most advanced motor/control components for the U.S. hybrid bus industry and we believe these will set the bar for years to come,” said Siemens special application director, Eugen Holl.

ISE will be integrating the new motor and inverters into drive systems specifically optimized

-more-



for high-performance and high-speed operation. The company will also be developing new gasoline and diesel engine generator systems with optimized control algorithms to maximize fuel economy and minimize emissions. These will be integrated with ISE's advanced energy storage systems including both ultracapacitors and batteries to provide the state-of-the-art in heavy duty hybrid drive systems. "We expect this new TB60BRT drive system to offer industry-leading fuel economy and emissions," said ISE president, David Mazaika.

Siemens Energy and Automation Inc. is one of Siemens' operating companies in the U.S. Headquartered in the Atlanta suburb of Alpharetta, Ga., Siemens Energy & Automation manufactures and markets one of the world's broadest ranges of electrical and electronic products, systems and services to industrial and construction market customers. Its technologies range from circuit protection and energy management systems to process control, industrial software and totally integrated automation solutions. The company also has expertise in systems integration, technical services and turnkey industrial systems. For more information: [www.sea.siemens.com](http://www.sea.siemens.com).

ISE Corporation, based in San Diego, is a leading supplier of hybrid drive systems and components for heavy-duty vehicles such as buses, trucks, trams, airport equipment, and military vehicles. ISE is a world leader in electric, hybrid-electric, and fuel cell technologies, and the U.S. distributor for Siemens ELFA™ electric and hybrid-electric drive components. For more information please contact Mr. Gary Willms at (858) 413-1736, or visit [www.isecorp.com](http://www.isecorp.com).

###