

To: GE Energy's valued controls customer

September 2011

Subject: **Mark* Vle controls designed for extended life strategy – continuing investment in Mark Vle technology**

GE Energy continues to expand its energy industry **Mark* Vle controls product line**. Through technology advancements at the controller and I/O level, the infrastructure continues to serve as the industry's platform of choice in a broad range of applications.

At inception, **Mark Vle controls embraced the principle of extended life** through the adoption of an Ethernet backbone design with discrete modular building blocks, including controllers, network components and I/O modules, and extensive software tools. This design allows for incremental technology upgrades, obsolescence protection, parts life cycle planning and comprehensive system upgrades, without the need to replace the entire control system. The intended consequence of GE's design principle is **long life for the Mark Vle controls platform**. GE continues to invest in the Mark Vle controls infrastructure on a component-by-component basis as new technology warrants or as required by part obsolescence. Because of this design strategy, a replacement for the Mark Vle control system Infrastructure is not needed or being developed for our customers to maintain a state of the art control system.

GE Energy has designed the **Mark Vle controls platform** for both **highly reliable operation** of GE's originally provided equipment and **extended product life cycle support**. GE is a leading Original Equipment Manufacturer (OEM) supplier to the Power and Oil & Gas industries, which expect robust, dependable equipment and technical support to avoid unplanned downtime or unacceptable availability risk. Many users of the legacy Mark series controls have experienced decades of stable and predictable equipment availability, demonstrating the long life support that often exceeds the general industry.

Two examples that demonstrate how the **Mark Vle controls capabilities have been expanded to implement new technological advances** are the physics-based control and smart field devices. GE pioneered the application of the physics-based control that enables expanded operating envelopes, reduced emissions, and better management of turbine parts life compared to alternatives. Finally, GE's application of smart instruments and field devices provide improved accuracy and predictive health insights for our new products and aftermarket offerings.

The Mark VIe controls infrastructure provides our customers with confidence of long life support and a pathway to grow their control system functionality over time. GE is committed to helping customers manage their GE control systems over the entire product life. The Mark VIe controls design provides a control system that is easily maintained and migrated as customer needs or technology changes, without replacing the entire system.

Regards,

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