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**Pegasus power system facility upgrades<sup>1</sup>** B.T. LEWICKI,  
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— Two key Pegasus systems have been recently upgraded: the Ohmic-  
transformer IGCT bridge control system, and the plasma-gun injector  
power system. The Ohmic control system contains two new micropro-  
cessor controlled components to provide an interface between the PWM  
controller and the IGCT bridges. An interface board conditions the  
command signals from the PWM controller. A splitter/combiner board  
routes the conditioned PWM commands to an array of IGCT bridges  
and interprets IGCT bridge status. This system allows for any PWM  
controller to safely control IGCT bridges. Future developments will in-  
clude a transition to a polyphasic bridge control. This will allow for 3  
to 4 times the present pulse length and provide a much higher switching  
frequency. The plasma gun injector system now includes active current  
feedback control on gun bias current via PWM buck type power sup-  
plies. Near term goals include a doubling or tripling of the applied bias  
voltage. Future arc bias system power supplies may include a simpler  
boost type system which will allow access to even higher voltages using  
existing low voltage energy storage systems.

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Prefer Oral Session  
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