

## **Expression of Interest**

CSIR-CEERI, Pilani; invites an expression of interest from public and private sector companies to transfer the technology of High voltage Short Pulse Power Supply

### **AVAILABLE TECHNOLOGY**

#### **High Voltage Short Pulse Power Supply**

A High voltage Short Pulse Power Supply (HV-SPPS) has been developed at CSIR-CEERI primarily for its potential applications, such as, non-thermal plasma sources, dielectric barrier discharge devices and sources, plasma UV lamps, etc.

#### **Design of the High voltage Short Pulse Power Supply**

The HV-SPPS is a single switch transformer-based current source pulse power supply for capacitive loads. It consists of the SiC MOSFET, diode for high reliability and ferrite core transformer to generate high voltage pulses of amplitude up to -5 kV/25kHz and a pulse width of 1 $\mu$ s to produce efficient non-thermal plasma.

An inherent feature of this HV-SPPS comprises of high efficiency and elimination of an external resistor required for wave shaping and discharging of capacitive load. Thus, it does not require forced cooling methods to dissipate the resultant heat.

It is a small size, high frequency and high voltage pulse power supply for non-thermal plasma sources and capacitive loads.

#### **Fabrication, and Testing of High Voltage Short Pulse Power Supply**

The design of the HV-SPPS have been done at CSIR-CEERI, Pilani. The major technical specifications are given in Table-1.

#### **Specifications:**

Input Supply	: 220V, 50Hz
Output Pulse Voltage	: -5kV
PRF	: 25kHz
Pulse width	: 1000ns



Application: water treatment, air purifier systems and surface treatment of materials etc.

#### **Contact Person for Expression of Interest:**

Dr. J. L. Raheja, Chief Scientist and Head PME, CSIR-CEERI, Pilani-333031,

Email: [headpme@ceeri.res.in](mailto:headpme@ceeri.res.in), [raheja@ceeri.res.in](mailto:raheja@ceeri.res.in)