

# Agenda for NIST/DOE Workshop on High-Megawatt Direct-Drive Motors and Front-End Power Electronics (September 4, 2014)

## 8:30am Convene

### 1) Introduction Session:

Introduction of participants

Previous HMW Workshops & Workshop Goals and Key Questions – [Al Hefner](#)

DOE EERE Needs for Program Planning – [Anant Agarwal/ Ziaur Rahman](#)

ABB – Applications of High-RPM DD Motors in COG Industries (NG, LNG) – [Waqas Arshad](#)

GE OG – Applications for High-Speed Motors in Oil and Gas Industries – [Ravi Raju](#)

## Break 10-10:30am

### 2) Panel: Integration of Mechanical and Drive Technology for High-Speed Motors ([Tom Lipo](#)):

ABB/Baldor – Motor mechanical/drive system integration – [Steve Englebretson](#)

UTK – Benefits of high-speed SiC drives for integrated direct-drive motor system – [Leon Tolbert and Fred Wang](#)

GE Electrical Machines – Integration of SiC power devices into high-power motor drives – [Ayman EL-Refaie](#)

Teco Westinghouse – High-Speed direct-drive motors enabled by SiC power devices – [Paulo Guedes-Pinto](#)

## LUNCH 12:00-1pm

Panel discussion period

### **3) Panel: WBG Devices Cost and Development Roadmap (Leo Casey):**

Cree – Power products roadmap plans for commercialization of SiC power switches and power diodes from 2012-2020 – **Jeff Casady**

Cree – Power products reliability data and pricing forecasts for power module, power MOSFET and power diode products from 650V to 15kV. – **John Palmour**

United SiC – Economic viability of SiC power commercial foundry approach – **Anup Bhalla**

Monolith – Foundry process integration and product roadmap and cost projections for 1200V/1700V devices – **Sujit Banerjee**

APEI – Manufacturing low cost SiC module packages – **Kraig Olejniczak**

**Break 3:00 -3:30pm**

**Panel discussion period**

### **4) Panel: Advanced motor and drive technology (Ravi Raju):**

PNNL – Magnetic Materials for Motors – **Jun Cui**

NCSU – High-voltage, high-frequency SiC power electronics – **Subhashish Bhattacharya**

Panel discussion period

**5pm Adjournment**