

TECHNOLOGY DEVELOPMENT PROJECT FACT SHEET

FF006: LOW SPEED VOLTAGE MONITORING

The control of undercharging the battery pack on the battery electric vehicles has been a recurring problem. As a result, the VoltMon for the LSV battery monitor was developed, which is intellectual property of Pinnacle West Capital Corporation. It is a self-contained battery pack monitor and low SOC (State Of Charge) warning device. The 1x2x4 inch plastic box is connected to the positive and negative of the battery pack. Located on the box are three LEDs (green, yellow and red), as well as, a hole for the piezo buzzer for a low battery warning. The voltage set points are all scaled from a programmable pack voltage parameter. The pack voltage can be reset to any value between 30V to 100V.



By installing this device on the vehicle, it prevents the over discharging of the battery. The VoltMon indicates three possible states for the LSV battery pack, which depends on the SOC of the battery pack. Green indicates pack is charged (approximately 50% SOC or higher). Yellow indicates pack is slightly discharged (approximately 50% SOC or lower). Red including a buzzing sound indicates the battery is discharged and the vehicle needs to be plugged in.