

Battery Sizing PPT

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- 1 Load Determination
- 2 Voltage Finalization
- **3** Current Details
- **4** Environment Condition
- 5 Battery Sizing





Load Determination

- **★ EV**
- **★** Solar
- **★UPS**





Voltage Finalization

- **★ Motor Rating**
- **★** Controller rating
- **★** System Rating (Voltage Window)





Current Details

- **★** Peak Current (time)
- **★** Continuous Current (time)
- **★** Backup time requirement; Mileage





Environment Condition

- **★** Operating temperature
- **★** Discharge time (day or night)
- **★** Availability of AC







Battery Sizing





Battery Sizing

■ Battery sizing depend on points discussed above like load, voltage, current, temperature	
☐ Lithium battery is measured in kilo watt hr(KWH)	
☐ For determining kwh we need to know voltage and ampere hour i.e for eg. 48V 24AH (48*24 = 115 which is 1.152kwh	52)
■ Now for sizing depth of discharge (DOD) is important i.e for eg a 100Ah if discharge up to 80Ah the it said 80%DOD for that pack	en
☐ As we already know DOD is important for life cycle of pack it is decided as per longevity required be customer by as per theory 80% DOD is ideal.	Э
☐ If we are aware of voltage, current and back up time just multiply current and back up time eg (10, load * 10Hrs back up = 100AH) is minimum required, Just add 20% capacity as DOD is only 80%, the means u need 120AH battery pack.	
☐ In case of high operating temp like 50 degree and above add another 20% for long life, other wise battery will degrade faster.	



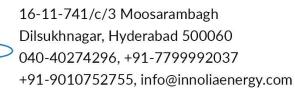
Thank You!

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