What is a good safety margin with regards to power rating of the motor.

* We assume our motor efficiency is 95% for a PMSM including the motor controller
* We expect to need 15kW of output power from the motor
  + 10% incline at 40km/h
* 7kW at 90km/h 0% incline.

Is it a good idea to connect the battery directly to the high voltage bus or should we have a bidirectional DC-DC converter between it and the bus?

* Specks for the battery:
  + 58S
  + Nominal voltage: 208V (3.7V pr. Cell)
  + Minimum voltage of 116V (2V pr. Cell)
  + Maximum voltage of 243,6V (4,2V pr. Cell)

Recommendations from nenad

* Keep torque requirements low
* Motor with gearbox is more power dense
* Use one motor!
  + Use one differential or have only one traction wheel
* Cooling is rarely worth it when it comes to efficiency.
  + It is worth it when it comes to performance.
  + Double check for efficiency
* Minimize power of motor
* Optimize the motor for idle driving at 90 km/h

Salient :

Has destinct motor poles

The permanent magnets are placed inside the rotor

Non-salient:

The permeanent magnets are placed on top op of (on the outside) of the rotor.