Renewable Energy Group	REQUIREMENT LIST Renewable Energy Management System	**5th Version: 12/11/2007**
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DATE UPDATE	**REQUIREMENTS**	**SOURCES**
12/3/2007	*Overall Function: Management of Renewable Energy System under different load conditions* **SYSTEM REQUIREMNETS** Provide approximately 100A limiting current at 12V system DC voltage	RE Team
12/1/2007	• Design dimension: 30" X 30" X 45" *(this approximation was made after considering the nature of the design)* • The prototype wiring must be able to operate within a 70^0 to 200^0C temperature range • The switching time is 16 to 26 milliseconds • 75 Watt DC to AC inverter o 90% max efficiency o Frequency output 50Hz ± o Output voltage regulation is ±5% o 12V DC input	SolarElectric.com RE Team
12/02/2007	**SYSTEM PERFORMANCE** ▪ Manage Load ▪ Manage energy generation ▪ Manage energy mixing ▪ Have a cost benefit to end user	RE Team RE Team

12/02/2007	**REGULATIONS** ▪ Article 690, Solar Photovoltaic Systems of the *NEC* specifically deals with PV systems ▪ *NEC* available [90.7, 100, 110.3] suggests (in some cases requires), and most inspection officials require, that equipment identified, listed, labeled, or tested by an approved testing laboratory be used ▪ *NEC* [720.4] requires 12 AWG (American Wire Gage) or larger conductors to be used with systems under 50 volts	NEC
12/06/2007	**SAFETY** • Device must not generate a fire hazard beyond that which a grill with charcoal does • Device must be well insulated	RE Team
12/06/2007	**ENVIRONMENT** • Device must last for at least 10 years in the following conditions: o Ambient temperatures ranging 70^0 to 200^0C o Must be able to tolerate rain, snow, sleet, hail	RE Team
12/06/2007	**CUSTOMER BENEFIT** Reduce carbon emissions	RE Team