Power Budget Example

Team Number: 203
Project Name: **EGR 304 - Sparkguard**
Team Member Names: **Ayush, Armando and Manny**
Version: **V2**

All Major Components	Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Solenoid	SparkFun 11015	5V	1	1100	1100	1100	mA
5V, 2.2 A Regulator	MSR5-0R005F1	+5V - 35V	1	2200	2200	2200	mA
+5V Power Rail	**Component Name**	**Part Number**	**Supply**	**Qty.**	**Absolute**	**Total**	**Unit**
	PIC18F57Q43 Curiosity N	PIC18F57Q43	5V	1	50	50	mA
	RED LED	754-1105-ND	5V	1	20	20	mA
	Solenoid	SparkFun 11015	5V	1	1100	1100	mA
	H-Bridge driver	FAN8100N	5 V	1	65	65	mA
					Subtotal	**1235**	**mA**
					Safety Margin	**25%**	
					Total Current Required on +5V Rail	**1543.75**	**mA**
5V, 2.2 A Regulator	**MSR5-0R005F1**	**+5V - 35V**	**1**	**2200**	**2200**	**2200**	**mA**
					Total Remaining Current Available on +5V Rail	**656.25**	**mA**

External Power Source 1	**Component Name**	**Part Number**	**Supply**	**Output**	**Absolute**	**Total**	**Unit**
Power Source 1 Selection	Plug-in Wall Supply	KSAS0050900050V	120VAC	9	3000	3000	mA
Power Rails Connected to External Power Source 1							
	5V, 2.2 A Regulator	MSR5-0R005F1	+5V - 35V	1	2200	2200	mA
					Total Remaining Current Available on External Power Source 1	800	mA

Notes:

External Supply Voltage should be determined by the dropout voltage for highest-voltage regulator (e.g., +14V for a +12V regulator).
If you have multiple units in your design (e.g., a base unit and remote unit) then you need a separate power budget for each unit