



Exhibit A: Critical Loads

The following load data is the estimated consumption and load profile of the equipment to be powered in each school with the installed microgrid. These loads should be able to operate under normal electrical grid conditions and during grid outages.

The following table outlines all equipment considered to be critical loads and should be included on the critical loads circuit to be powered by the microgrid. The load profile should give an indication of the performance requirements of the system and should be considered when designing the system.

Critical Loads per School

	Power [W]	Units	Hours	Total W	Total Wh
Kitchen					
Refrigerator large	551	2	24	1,103	26,467
Freezer large	663	1	24	663	15,900
Cooler large	288	1	24	288	6,900
Lighting LED	12	30	8	360	2,880
Oven fan	5	1	8	5	40
Generic charging outlet	100	1	9	100	900
Library / Computer room					
Desktop computers	100	2	5	200	1,000
Laptop computers	50	30	5	1,500	7,500
Lighting LED	12	6	10	72	720
Small printers	50	1	1.5	13	75
Large printers - idling	20	1	23	20	480
Large printers - printing	1200	1	1.5	300	1,800
Wifi router	35	2	24	70	1,680
Generic charging outlet	100	4	9	400	3,600
Admin office					
Desktop computers	100	1	9	100	900
Laptop computers	50	2	9	100	900
Wifi router	35	1	24	35	840
Lighting LED	12	4	9	48	432
Generic charging outlet	100	2	9	200	1,800
TOTALS				5,575	74,814



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