

Electrical Components

<i>Aquaponic System</i>																		
Units	Code	Components	Usage	On Backup	volts	amps	watts	Kwh	Op Hours	Op Days/Week	Op Months	Daily kWh	Cost per day	Monthly kWh	Cost Per month	Cost Per year	% of total consumption	
1	B1	Proline Hydrive 4000	Main System Pump	y	120	1.9	230	0.23	24	7	12	5.5	\$0.55	165.6	\$16.56	\$198.72	24.9%	
1	B2	Proline Hydrive 4000	Fish Pump Runs in Decoupled Mode only	y	120	1.9	230	0.23				0.0	\$0.00	0	\$0.00	\$0.00	0.0%	
1	B3	AA 800 GPH Pump	Nursery Pump	y	120	0.4	50	0.05	0.5	7	12	0.0	\$0.00	0.75	\$0.08	\$0.90	0.1%	
1	B4	Dual Outlet Timer	Controls Nursery Pump	y	120	0.4	50	0.05	0.5	7	12	0.0	\$0.00	0.75	\$0.08	\$0.90	0.1%	
1	B5	AA 1000 GPH Pump	Runs Elevated DWC	Y	120	0.8	92	0.092	24	7	12	2.2	\$0.22	66.24	\$6.62	\$79.49	9.9%	
1	B6	SweetWater S31 Regenerative Air Blower	Main Aeration Pump	y	120	3.9	471	0.471	24	7	12	11.3	\$1.13	339.12	\$33.91	\$406.94	50.9%	
1	B7	SweetWater S31 Regenerative Air Blower	Backup Aeration	y	120	3.9	471	0.471				0.0	\$0.00	0	\$0.00	\$0.00	0.0%	
1	B8	BlueLab Guardian Connect	pH, Temp, EC Monitor	n	120	0.4	50	0.05	24	7	12	1.2	\$0.12	36	\$3.60	\$43.20	5.4%	
1	B9	Homesitter Auto dialer alarm system(optional)	Flood, temp and power monitor	n	120	0.4	50	0.05	24	7	12	1.2	\$0.12	36	\$3.60	\$43.20	5.4%	
1	B10	Controller for AquaHeat (optional)	temperature controller	y	120	1.0	120	0.12	12	7	6	1.4	\$0.14	43.2	\$4.32	\$25.92	3.2%	
Totals												22.9	\$2.29	687.66	\$68.77	\$799.27	40.9%	
<i>Greenhouse Equipment</i>																		
6		HAF Fans	air circulation throughout greenhouse	y	230	1.6	372	2.232	8	7	12	17.9	\$1.79	535.68	\$53.57	\$642.82	55.7%	
2		Ventilation Fans	air ventilation and exchange	y	230	3.2	745	1.49	12	7	6	17.9	\$1.79	536.4	\$53.64	\$321.84	27.9%	
1		Wet wall pump	circulating pump for cooling wall	y	110	3.6	400	0.4	12	7	6	4.8	\$0.48	144	\$14.40	\$86.40	7.5%	
1		Environmental Controller	manages heat and cooling systems	y	120	1.0	120	0.12	24	7	12	2.9	\$0.29	86.4	\$8.64	\$103.68	9.0%	
Totals												43.4	\$4.34	1302.48	\$130.25	\$1,154.74	59.1%	

Electrical Consumption

Date	Days Since Last Read	Total kWh Use Flourish	GrowHaus Use (kWh)	% of GH Use	GrowHaus Electric Bill	% of GH Electrical Bill in \$	Cost per kWh
1/27/2015	31	1456	9542	15%	\$742.69	\$113.33	\$0.08
2/28/2015	32	1428	7480	19%	\$735.47	\$140.41	\$0.10
3/30/2015	30	1464	9000	16%	\$896.67	\$145.86	\$0.10
4/30/2015	31	1464	8320	18%	\$826.86	\$145.50	\$0.10
6/2/2015	33	1091	7640	14%	\$759.41	\$108.44	\$0.10
7/2/2015	30	1183	9680	12%	\$1,164.74	\$142.34	\$0.12
8/4/2015	33	1369	9640	14%	\$1,198.62	\$170.22	\$0.12
9/5/2015	32	1209	9960	12%	\$1,288.40	\$156.39	\$0.13
10/6/2015	31	1175	11000	11%	\$1,339.71	\$143.11	\$0.12
11/8/2015	33	1036	7920	13%	\$823.50	\$107.72	\$0.10
12/4/2015	26	1066	8200	13%	\$792.24	\$102.99	\$0.10
Total 2015		13941	98382		\$10,568.31	\$1,476.31	
1/7/2016	34	1111	9320	12%	\$898.74	\$107.14	\$0.10
2/15/2016	39	1089	9280	12%	\$851.93	\$99.97	\$0.09
3/5/2016	19	1197	10440	11%	\$934.81	\$107.18	\$0.09
4/9/2016	35	1169	10240	11%	\$917.14	\$104.70	\$0.09
5/13/2016	34	1501	7760	19%	\$727.30	\$140.68	\$0.09
6/5/2016	23	1532	9480	16%	\$799.74	\$129.24	\$0.08
7/1/2016	26	1496	10200	15%	\$987.36	\$144.81	\$0.10
8/3/2016	33	1463	11640	13%	\$1,022.15	\$128.47	\$0.09
9/2/2016	30	1329	10980	12%	\$1,317.60	\$159.48	\$0.12
10/4/2016	32	1291	8390	15%	\$1,006.80	\$154.92	\$0.12
11/7/2016	34	1220	7840	16%	\$784.00	\$122.00	\$0.10
12/9/2016	32	1301	8200	16%	\$820.00	\$130.10	\$0.10
Total 2016		14588	104450		\$10,168.83	\$1,421.56	

GrowHaus electrical consumption would include pumps and environmental controls in hydrofarm, 2 walk in refrigerated coolers, normal building lights, dish washer, refrigerator, office equipment, 5 air conditioning units