

Expanded calculated:
Testing 2.1-February 2-20th BBX-3G, of BWG and Waste Oils System

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Fuel Blend Test Feb. 2-20-2018	Flame size L x W Inches (cm)	Fuel rate fire gph. (L)	Flame Temp. F (c)	Carbon Monoxide CO ppm	Estimate BTU/Gal.(KJ/l.) x 1000	Burn Eff. %	Actual heat BTU(KJ)x1000 fire rate	Actual BTU heat per gal.	Actual heat per liter(KJ)	Actual BTU per Lb.	liters per MMBTU	Cost per Liter.	\$\$\$ Cost for 1MMBTU
2	#4 + Waste Oils \$1.23/gal					149.8(40.99)								Actual
3	Test 1-13 w/ Burner Boost.													
4	c- #2 oil Normal Burn	22x13 (55x31)	5.25 (19.87)	1490(807)	15 ppm	131.0(36.48)	77%	490.1(518.6)	93,320	24,652	10,560	40.5	0.70	28.3
5	1. #2 oil Burn. Boost.	36 x 10 (91x25)	3.56(13.47)	1565(851)	9 ppm	131.0(36.48)	92%	429.1(452.7)	120,520	31,837	13,695	31.4	0.70	22.0
6	2. 20% WO 80% #2	38 x 11(96x28)	3.65(13.81)	1616(879)	4 ppm	139.0(38.74)	93%	471.9(498.1)	129,300	34,157	14,693	29.2	0.60	17.0
7	3. 40% WO 50% #2	39 x 12(99x30)	3.65(13.81)	1625(885)	2 ppm	143.0(39.86)	93.5%	488.1(514.9)	133,705	35,320	15,193	28.3	0.54	15.0
8	4. 50% WO 50% #2	40x13(102x34)	3.72(14.08)	1645(896)	1 ppm	143.5(39.99)	93.7%	500.1(527.5)	134,413	35,507	15,275	28.1	0.52	14.0
9	5. 80% WO 20% #2	42x15(107x37)	3.72(14.08)	1675(912)	1 ppm	146.0(40.68)	94.2%	516.9(545.4)	138,945	36,705	15,789	27.2	0.48	13.0
10														
11	Will not burn well with other technologies; Waste Bio Glycerin (WBG) and oils													
12	10. 20% WBG 60% WO + #2	40 x 14	3.75(14.19)	1685(918)	3 ppm	147.0(40.97)	93.1%	512.7(541.1)	136,530	36,067	15,514	27.7	0.33	9.3
13	11. 50% WBG 40% WO + #2	43 x 15	3.75(14.19)	1726(941)	8 ppm	147.6(41.15)	92.5%	535.1(564.6)	136,720	36,117	15,468	27.6	0.28	7.8
14	12. 80% WBG 15% WO + #2	44 x 17	3.82(14.46)	1780(971)	12ppm	148.5(41.39)	91.3%	567.3(598.6)	137,135	36,226	17,141	27.5	0.21	6.1
15	13. 92% WBG 8% WO	49 x 18.5	3.82(14.46)	1833(999)	21 ppm	152.0(42.50)	91.0%	580.1(614.6)	138,775	36,660	17,346	27.1	0.16	5.2
16														
17	WBG at 45 cents/gallon \$ 2.76/MMBTU delivered							BTU/ lb.	92%					
18	Standrad Burner with #4 burner oil heat costs at \$ 2.15/gal								78%					\$17.86
19	Burner Booster Industrial #4 oil at \$2.15/gallon \$ 13.60 /MMBTU Delivered								92%	controls R&M and Overhead costs				\$13.61
20	N. GAS standard supply \$3.97/MMBTU. (delivered-pipe)								83%	Controls R&M and over head costs				\$11.31
21	Burner Booster "oil blend" #4 + B-100 + WBG + #2 oil Burn total efficiency best cost								94%					\$12.85
22	N. Gas is a referance to focus on % eff of output costs-as a guide.									Actual heat produced VS supply and costs per 1MM BTU !!				
23	Most efficient to use recycled bio-waste oils, crude glycering, No 2 heating and B-100. 80% green fuel from renewables.													
24														
25	#4 Emissions to be very much improved.													
26	Current max combustion burn efficiency with Burner Booster peaks about 95.0%													
27														
28	These results are in line with a series of similar test done 4X since 2012.													