

gasification																					
Stream ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	AIR	BIOMASS	WATER	
Temperature K	646.2	300.0	300.0	300.0	1073.0	75.0	298.0	745.0	335.4	335.4	299.4	347.8	284.4	616.2	284.6	560.8	284.4	303.0	303.0	300.0	
Pressure atm	1.00	1.00	1.00	1.00	1.00	1.00	1.00	180.00	0.20	0.20	180.00	1.00	0.39	5.00	5.00	0.39	0.39	1.00	1.00	1.00	
Vapor frac	1.00	0.00	0.00	0.00	0.779	1.00	0.00	1.00	0.794	0.00	0.00	0.907	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	
Mole Flow kmol/hr	3.974	1.388	1.388	1.388	3.217	3.974	0.333	0.333	0.333	0.333	0.333	3.974	0.693	0.693	0.693	0.693	0.693	1.571	0.00	1.388	
Mass Flow kg/hr	95.319	25.000	25.000	25.000	50.000	95.319	6.000	6.000	6.000	6.000	6.000	95.319	50.000	50.000	50.000	50.000	50.000	45.319	0.00	25.000	
VolumeFlow cummsec	0.039	<0.001	<0.001	<0.001	0.061	0.070	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.028	<0.001	0.002	<0.001	0.022	<0.001	0.011	0.00	<0.001
Enthalpy MMBtu/hr	-0.578	-0.378	-0.378	-0.378	-0.150	-0.561	-0.091	-0.075	-0.079	-0.090	-0.091	-0.632	-0.115	-0.061	-0.115	-0.069	-0.115	<0.001	<0.001	<0.001	-0.378
Mole Flow kmol/hr																					
WATER	1.614	1.388	1.388	1.388	1.388	1.614	0.333	0.333	0.333	0.333	0.333	1.614									1.388
C						0.710															
H2		0.403			0.645	0.403						0.403									
N2		1.247			0.001	1.247						1.247									1.246
O2					0.473																0.326
Cl2																					
S		0.001			0.001	0.001						0.001									
CO2		0.669				0.669						0.669									
CO		0.033				0.033						0.033									
CH4		0.008				0.008						0.008									
NPENTAN															0.693	0.693	0.693	0.693			
Mass Flow kg/hr	95.319	50.000	50.000	50.000	50.000	95.319	6.000	6.000	6.000	6.000	6.000	95.319	50.000	50.000	50.000	50.000	50.000	45.319	25.000	25.000	
Enthalpy MMBtu/hr	-0.578	-0.560	-0.560	-0.560	-0.150	-0.561	-0.091	-0.075	-0.079	-0.090	-0.091	-0.632	-0.115	-0.061	-0.115	-0.069	-0.115	<0.001	<0.001	<0.001	-0.378
Temperature K		300.0	300.0	300.0																303.0	
Pressure atm		1.00	1.00	1.00	1.00	1.00	1.00	180.00	0.20	0.20	180.00	1.00	0.39	5.00	5.00	0.39	0.39	1.00	1.00	1.00	
Vapor frac		0.000	0.000	0.000	0.000															0.000	
Mass Flow kg/hr		0.00	25.000	25.000	25.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.000	0.000
Enthalpy MMBtu/hr		-0.182	-0.182	-0.182	-0.182																-0.182
Mass Flow kg/hr			25.000	25.000	25.000																25.000

Aspen plus flowsheet report for combined heat and power model proposed in the system