

## 4 Fuel Supply/Energy Use Comparisons

This section compares the baseline RDF and C&D biomass fuel availability to the steam demands of Rock-Tenn.

### 4.1 Base Loading Rock-Tenn Needs

Table 4-1 compares available steam production to Rock-Tenn's demand based upon firing the boilers with the average RDF produced by month (Reference Table 2-2).

Table 4-1 RDF Seasonal Based Steam versus Rock-Tenn Demand

Month	Rock-Tenn Ave Steam Usage (PPH)	RDF Produced (TPM)	RDF Boiler Feed (PPH)	Steam to Rock-Tenn (PPH)	Steam Shortage to Rock-Tenn (PPH)	Total Power Production (KWH/Hr)	Internal Power Consumption (KWH/Hr)	Saleable Power Production (KWH/Hr)
January	263,497	21,378	57,468	202,438	-61,059	3,945	4,500	-555
February	263,088	20,930	62,292	222,586	-40,502	3,969	4,500	-531
March	259,327	24,816	66,710	241,039	-18,288	3,991	4,500	-509
April	229,218	29,712	82,533	229,218	0	11,042	4,700	6,342
May	212,708	31,636	85,043	212,708	0	13,622	4,800	8,822
June	183,551	29,578	82,161	183,551	0	15,259	4,900	10,359
July	195,691	29,986	80,608	195,691	0	13,478	4,800	8,678
August	189,689	31,259	84,030	189,689	0	15,418	4,900	10,518
September	202,155	28,104	78,067	202,155	0	11,845	4,800	7,045
October	220,565	27,501	73,927	220,565	0	8,432	4,700	3,732
November	251,614	27,737	77,047	251,614	0	6,710	4,600	2,110
December	240,829	27,171	73,040	240,829	0	6,141	4,600	1,541
<b>Average</b>	225,994	27,484	75,244	216,007		9,488	4,692	4,796

After adjusting for Rock-Tenn's December seasonal outage, there is insufficient average RDF produced to meet Rock-Tenn's average steam demand during the months of December, January, February, and March.

When considering peak steam demands, the existing RDF production would likely not meet needs from November through March.

To fully base load Rock-Tenn's needs and meet peaking requirements, the Biomass/RDF boilers need an average fuel feed rate of 45 tons per hour (90,000 PPH).

#### 4.2 Seasonal Waste Stream and Rock-Tenn Energy Demand

Table 4-2 compares available steam production to Rock-Tenn's demand based upon firing the boilers with the average available RDF plus C&D biomass fuel products (Reference Tables 2-2 and 2-5).

Table 4-2 RDF/Biomass Seasonal Based Steam versus Rock-Tenn Demand

Month	Rock-Tenn Ave Steam Usage (PPH)	RDF Produced (TPM)	C&D Processed Biomass Produced (TPM)	Available Boiler Feed <sup>1</sup> (PPH)	Steam to Rock-Tenn (PPH)	Steam Shortage to Rock-Tenn (PPH)	Total Power Production (KWH/Hr)	Internal Power Consumption (KWH/Hr)	Saleable Power Production (KWH/Hr)
January	263,497	21,378	5,691	72,766	263,497	0	3,865	4,500	-635
February	263,088	20,930	5,805	79,568	263,088	0	6,620	4,500	2,120
March	259,327	24,816	7,448	86,731	259,327	0	9,840	4,500	5,340
April	229,218	29,712	9,687	109,442	229,218	0	14,023	4,700	9,323
May	212,708	31,636	11,658	116,382	212,708	0	15,602	4,800	10,802
June	183,551	29,578	12,331	116,414	183,551	0	18,389	4,900	13,489
July	195,691	29,986	13,445	116,750	195,691	0	17,228	4,800	12,428
August	189,689	31,259	13,993	121,645	189,689	0	17,802	4,900	12,902
September	202,155	28,104	12,894	113,883	202,155	0	16,610	4,800	11,810
October	220,565	27,501	14,078	111,772	220,565	0	14,850	4,700	10,150
November	251,614	27,737	10,037	104,928	251,614	0	11,882	4,600	7,282
December	240,829	27,171	7,932	94,363	240,829	0	12,913	4,600	8,313
<b>Average</b>	<b>225,994</b>	<b>27,484</b>	<b>10,417</b>	<b>103,720</b>	<b>225,994</b>		<b>13,302</b>	<b>4,692</b>	<b>8,610</b>

<sup>1</sup>Boiler feed is limited to 90,000 PPH.

The combined waste streams are sufficient to meet Rock-Tenn's average steam usage. The combined waste streams would not meet peak steam demands during the months of January and February. Forty-five (45) tons per hour of combined RDF and C&D waste need to be supplied as fuel when both boilers are operating; 31.5 tons per hour of fuel must be supplied when only one (1) boiler is operating.

It should be noted that under an expanded Newport Facility as addressed in this analysis, adequate RDF fuel could be provided to meet the needs of Rock-Tenn.