

Paper & Forest Products

"Black Liquor" Gold; Sector Stands to Benefit from Alt. Fuel Tax Credits

In response to a number of questions following our VRS note dated 5 March ([click here](#) to view the note), we wanted to provide some additional color on alternative fuel tax credits. While specific details of the credits remain limited, we have attempted to estimate potential benefits to eligible companies under our coverage. Importantly, however, we think the likelihood is high that this credit (which appears to us more like an incentive payment) is eliminated – or at least reduced – when it is set to expire at the end of '09. Even though we expect only a temporary cash infusion, the amounts are material and fairly well timed given where we are in the cycle and strained balance sheets; however, we'd note there is a serious risk this credit results in overproduction of pulp and severe downward pressure on pulp prices. Please see the body of this note for our more detailed company-by-company estimates of potential tax credits.

- **Burning black liquor into gold.** The tax credit is valid for standalone chemical market pulp mills or paper mills with an integrated kraft pulping line. Upon approval, a facility is eligible to receive a \$0.50 per gallon tax credit for burning a combination of black liquor and traditional fossil fuel. As a rule of thumb, mills consuming pine softwood fiber will throw off more black liquor during pulping than hardwood-consuming mills. Black liquor is a byproduct of the kraft process that contains lignin (the “glue” that holds cells together) and “cooking” chemicals among other carbon-based material. An average sized U.S. pulp mill (~300,000 tons/year) can burn over 175mm gallons of black liquor per year in its recovery boilers, which implies an annual credit of ~\$90mm. Our math is “back of the envelope” and based largely on disclosures in the 10Ks of IP and VRS, but we estimate the tax credit translates into roughly \$300 per U.S. short ton of pulp production.
- **The more pulp mills the merrier.** We estimate that IP, UFS, TIN, and MWV stand to benefit the most from the alternative fuel tax credit (see Table 2), which is not entirely surprising, as these companies have the largest U.S.-based kraft pulp mill systems. Even for the smaller companies, the inflow of what appears to be unrestricted cash is well timed. VRS (\$32mm market cap) received \$30mm in cash credits in February at its Androscoggin mill and expects an additional ~\$30mm in March for production during 4Q at Quinnesec. Again, we want to make it clear to investors that we do not believe this tax credit is sustainable at current levels and, in addition, we think it could be difficult for all companies to become certified in time to apply for credits on 4Q08 production.
- **Significant assumptions in our analysis.** Aside from assuming that each company in the sector has already applied to be an alternative fuel “mixer,” our largest assumption is the quantity of black liquor burned in the recovery boilers at each company’s pulp mills. Most companies only disclose total market pulp and total paper capacity, thus we have been forced to make an educated best estimate as to the amount of integrated pulp capacity at each mill, and, assuming our \$300/ton credit payment math is reasonably accurate, miscalculation of integrated capacity could drive significant variance to our estimated tax credits. Furthermore, we have excluded current production downtime, which is considerable. Lastly, we are unaware of any limit on the aggregate value of tax credits that a company can claim.

See page 6 for analyst certification and important disclosures.

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Methodology and Key Assumptions

Table 1: Key Assumptions

Assumptions based on VRS and IP	
Credit (\$mm)	30
\$/gallon credit	0.50
Gallons burned (mm)	59
Tons pulp produced (000)	101
Implied gal/ton	587
\$ credit/ton pulp	294

Source: Company reports and J.P. Morgan estimates.

We believe the tax credit is applicable only to the gallons of black liquor burned in conjunction with another fossil fuel in a company's recovery boilers. Since black liquor is only produced as a byproduct of the kraft pulping process, we have estimated each company's potential tax credit based on annual pulp production capacity. Unfortunately, most companies do not disclose total market and integrated pulp capacity, so we have been forced to make an educated best estimate as to the amount of integrated pulp capacity at each mill.

For Verso's Androscoggin mill, we know the total annual kraft pulp capacity is 404,600 short tons or roughly 101,000 tons per quarter. Verso disclosed in its 10K (page 74) that it received in February 2009 an incentive payment of \$29.7mm for operations at its Androscoggin mill during the fourth quarter of 2008, which after applying IP's disclosure (page 38 of the 2008 10K) that the credit equals \$0.50 per gallon of alternative fuel mixture, implies that VRS burned roughly 60mm gallons of black liquor mixture (including some other fossil fuel) at Androscoggin in 4Q08. Assuming Androscoggin ran at capacity in 4Q (in reality the mill likely ran below capacity given the weak demand environment), we estimate that the mill burned roughly 590 gallons/short ton of pulp production translating into a \$294 tax credit per short ton of U.S. pulp produced (see Table 1).

Table 2: Potential Payments to Companies Utilizing Alternative Fuel Tax Credits

Company	Estimated Eligible Capacity (000 tons)	Estimated Quarterly Credit (US\$mm)
International Paper	12,752	936
Domtar	3,122	229
Temple-Inland	2,642	194
MeadWestvaco	2,600	191
Weyerhaeuser	1,909	140
Packaging Corp. of America	1,820	134
Sappi	900	66
Verso	878	64
Rayonier	740	54
RockTenn	435	32

Source: Company reports and J.P. Morgan estimates.

Table 2 above and the tables on the flowing pages present our best estimates at the present time of potential tax credits for each company. We want to stress that these are estimates only and that we are estimating each company's total fiberline capacity (combined integrated and non-integrated pulp capacity) using virgin fiber-based end product production capacity. We have not factored into our analysis the heavy downtime currently being taken across the sector, which would presumably result in lower production (and less black liquor). In addition, we have assumed that each company's mills have all been certified as alternative fuel mixers eligible to claim the credit and that each company has the appropriate infrastructure and reporting procedures in place to take advantage of the credit. For those companies with mills producing both virgin and recycled-fiber based paperboard, we have assumed fiberline capacity equal to each mill's total capacity but adjusted cumulative company capacity figures to reflect the OCC usage.

Table 3: Verso Paper Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$m)
Verso Paper	Pulp (integrated and market)	Jay (Androscoggin), ME		405	119
		Quinnesec, MI		473	139
	Total integrated and market pulp			878	258
	CFS	Jay (Androscoggin), ME	247		
		Quinnesec, MI	395		
Total CFS			642	NM	
Total Estimated Annual Credit (US\$m)					258

Source: Company reports and J.P. Morgan estimates.

Table 4: International Paper Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$m)		
International Paper	Market pulp	Georgetown, SC		340	100		
		Selma, AL		120	35		
		Courtland, AL		120	35		
		Bastrop, LA		*450 - idled	--		
		Riegelwood, NC		475	139		
	Total market pulp			1,055	310		
	UCFS	Ticonderoga, NY	255	255	75		
		Georgetown, SC	200	200	59		
		Selma, AL	580	580	170		
		Franklyn, VA	540	540	159		
		Eastover, SC	630	630	185		
		Courtland, AL	750	750	220		
	Total UCFS			2,955	2,955	868	
Containerboard	Linerboard	Pineville, LA	400	400	117		
		Savannah, GA	865	865	254		
		Prattville, AL	980	980	288		
		Vicksburg, MS	560	560	164		
		Mansfield, LA	800	800	235		
		Valliant, OK	990	990	291		
		Pine Hill, AL	560	560	164		
		Campiti, LA	970	970	285		
		Springfield, OR	610	610	179		
		Albany, OR	280	280	82		
		Pensacola, FL	500	500	147		
		Henderson, KY	220		NM - 100% recycled		
		Cedar Rapids, IA	495		NM - 100% recycled		
		Total kraft linerboard			8,230	7,515	2,207
		Semi-chemical medium	Mansfield, LA	375	375	110	
Terre Haute, IN	200		200	59			
Fort Madison, IA	100		100	29			
Valliant, OK	400		400	117			
Pine Hill, AL	310		310	91			
Cedar Rapids, IA	495			NM - 100% recycled			
Oxnard, CA	230			NM - 100% recycled			
Total semi-chemical medium			2,110	1,385	407		
OCC Adjustment				-2,060	-605		
Bleached board/bristols	Georgetown, SC	150	150	44			
	Riegelwood, NC	450	450	132			
	Augusta, GA	682	682	200			
	Texarkana, TX	620	620	182			
	Total bleached board/bristols			1,902	1,902	558	
Total Estimated Annual Credit (US\$m)					3,744		

Source: Company reports and J.P. Morgan estimates.

Table 5: Domtar Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$mm)
Domtar	Pulp (integrated and market)	Ashdown, AK	810	893	262
		Bennettsville, SC	356	392	115
		Hawesville, KY	455	502	147
		Johnsonburg, PA	231	255	75
		Kingsport, TN	272	300	88
		Nekoosa, WI	162	179	52
		Plymouth, NC	486	536	157
		Rothschild, WI	60	66	19
		Woodland, ME	398	*439	NA - will idle on May 5
		Dryden, Ontario	319		NA - Canadian
		Espanola, Ontario	351		NA - Canadian
		Kamloops, British Columbia	477		NA - Canadian
		Windsor, Quebec	454		NA - Canadian
Total integrated and market pulp			4,831	3,122	917
Total Estimated Annual Credit (US\$mm)					917

Source: Company reports and J.P. Morgan estimates.

*Note: Mill capacity converted from metric tonnes to short tons using 1.1023 short tons per metric tonne.

Table 6: MeadWestvaco Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$mm)
MeadWestvaco	Bleached board	Covington, VA	900	900	264
		Evadale, TX	700	700	206
		Total bleached board			1,600
	Coated natural kraft	Mahrt, AL	1,000	1,000	294
Total coated natural kraft			1,000	1,000	294
Total Estimated Annual Credit (US\$mm)					763

Source: Company reports and J.P. Morgan estimates.

Table 7: Packaging Corp. of America Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$mm)
Packaging Corp. of America	Linerboard	Counce, TN	1007	1,007	296
		Valdosta, GA	474	474	139
		Total linerboard			1,481
	Semi-chemical medium	Tomahawk, WI	516	516	152
		Filer City, MI	413	413	121
Total semi-chemical medium			929	929	273
		OCC Adjustment		-590	-173
Total Estimated Annual Credit (US\$mm)					534

Source: Company reports and J.P. Morgan estimates.

Table 8: Rayonier Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$mm)
Rayonier	Performance fibers	Jessup, GA	590	590	173
		Fernandina Beach, FL	150	150	44
		Total performance fibers			740
Total Estimated Annual Credit (US\$mm)					217

Source: Company reports and J.P. Morgan estimates.

Table 9: RockTenn Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$m)
RockTenn	Bleached board	Demopolis, AL	335	335	98
	Total bleached board		335	335	98
	Market pulp	Demopolis, AL	100	100	29
	Total market pulp		100	100	29
Total Estimated Annual Credit (US\$m)					128

Source: Company reports and J.P. Morgan estimates.

Table 10: Sappi Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$m)
Sappi	Pulp (integrated)	Cloquet, MN	410	410	120
		Somerset, ME	490	490	144
Total integrated pulp			900	900	264
Total Estimated Annual Credit (US\$m)					264

Source: Company reports and J.P. Morgan estimates.

Table 11: Temple-Inland Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$m)
Temple-Inland	Linerboard	Bogalusa, LA	913	913	268
		Rome, Georgia	894	894	263
		Orange, Texas	757	757	222
		Maysville, Kentucky	535		NM - 100% recycled
		Ontario, California	332		NM - 100% recycled
Total kraft linerboard			3,431	2,564	753
	Semi-chemical medium	New Johnsonville, Tennessee	378	378	111
		Newport, IN	339		NM - 100% recycled
Total semi-chemical medium				378	111
OCC Adjustment				-300	-88
Total Estimated Annual Credit (US\$m)					776

Source: Company reports and J.P. Morgan estimates.

Table 12: Weyerhaeuser Estimated Benefit

Company	Grade	Location	Mill Capacity	Estimated fiberline Capacity (000 tons)	Estimated Annual Credit (US\$m)
Weyerhaeuser	Cellulose fibers	Flint River, GA	350	386	113
		Columbus, MS	410	452	133
		New Bern, NC	320	353	104
		Port Wentworth, GA	380	419	123
		Grande Prairie, Alberta			NA - Canadian
Total cellulose fibers				1,609	473
	Paperboard	Longview, WA	300	300	88
Total paperboard			300	300	88
Total Estimated Annual Credit (US\$m)					561

Source: Company reports and J.P. Morgan estimates.

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Domtar (UFS/\$0.75/Overweight), International Paper Co. (IP/\$6.33/Neutral), MeadWestvaco (MWV/\$9.91/Overweight), Packaging Corp. of America (PKG/\$11.44/Neutral), Rayonier (RYN/\$25.81/Neutral), Rock-Tenn (RKT/\$25.30/Overweight), Sappi (SPP/\$2.01/Neutral), Temple-Inland (TIN/\$4.01/Neutral), Verso Paper (VRS/\$0.61/Neutral), Weyerhaeuser Company (WY/\$24.93/Neutral)

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