

Energy's Impact
or
Why I wish I worked for Exxon

Les Joel DI Plant Manager
Blue Heron Paper Co

Blue Heron Paper Co

- Founded May 5th, 2000
- 60% Investor, 35% ESOP, 5% Mgt
- 700 tpd Newsprint/Specialty Papers
 - News 45g – 90g, standard, bulk
 - reBrite 65, 68, 72, 75, 80
 - Bag and Heavyweights

Raw Materials

- Recycled Fiber 440 TPD Pulp 550 TPD Paper
 - Newspapers
 - Magazines
 - Mixed Paper
 - Office Pack / Ledger
 - Post Industrial

- Virgin 260 TPD
 - Spruce, Hemlock, Cottonwood
 - Saw Mill residuals

CONTAMINATION

- #8 News = #8 News
- Contamination is gone!

PRESENTATION TOPICS

- Dynamics of Electricity and Natural Gas
- Reaction to Market Changes
- Impact on Recycling Commodities
- Creative Energy Financing

Caveats

- Not Energy Expert
- Individual Pricing
- Not Clairvoyant

Energy Market Rules

1. Supply and Demand is dominant
2. World and Local events important
3. Ethics play a role
4. Emotions can trump fundamentals
5. If you think you control the market, refer to Rule #1

ELECTRICITY PRICING

Northwest Edition

Supply Drivers

- Hydro Production
 - Rainfall
 - River management
- Gamesmanship
 - Enron
 - Strategic Downtime
- Raw Materials
 - Natural Gas

ELECTRICITY PRICING

Northwest Edition

Demand Drivers

- California Demand
 - Summer temperatures
 - Transmission capacity
- Industrial Activity
 - Addition or Subtraction
- Self Generation
 - SP Newsprint

NATURAL GAS

NYMEX INDEX

	2000	2001	2002	2003	2004	2005
\$/MMBTU	2.1	2.3	3.2	5.4	6.1	7.8

- Event #1 March 2003 \$9.1 /MMBTU
 GEOPOLITICAL = Gulf War II, emotions
 WEATHER = cold spike in NW
- Event #2 2004 - Steady Increase from \$5 to \$7.5 / MMBTU
 DEMAND = US, China industrial production
 SUPPLY = Middle East volatility, US Production
- Event #3 Sept 2005 \$10.85 / MMBTU
 Oct 2005 \$13.9 / MMBTU
 WEATHER = Hurricane Damage
 GEOPOLITICAL = Gulf War II, skittish traders

BLUE HERON PAPER'S REACTION - ELECTRICITY

Virgin Pulp Cost Drivers

- Wood Chip prices
- Electricity

Recycled Pulp Cost Driver

- Waste Paper prices
- Chemicals

Virgin Pulp	2.70 MWH/Ton
Recycled Pulp	0.45 MWH/ton

BLUE HERON PAPER'S REACTION ELECTRICITY USAGE

'00	'01	'01	'02	'03	'04	'05
	J-S	O-D				
380	375	425	430	430	425	425
Tons per Day of Recycled Pulp						

Recycled **maximized** when Electricity high

Jan-Sept 2001

34 \$/MWH

Oct-Dec 2001

56 \$/MWH

BLUE HERON PAPER'S REACTION - NATURAL GAS

Boilers – Produce steam via Natural Gas

2004 Conditions

- Waste Wood Market weak
- AOR Fall Forum

2005 Residual Waste Wood

- Feed System modifications
- Match product characteristics to application

IMPACT ON RECYCLING COMMODITIES

Positives to Increasing Energy Prices

- Recycled substitutes generally use less energy
 - Extraction
 - Production
- Intrinsic value increases as virgin increases
 - Plastic vs Oil
 - Wood vs Natural Gas / Oil

IMPACT ON RECYCLING COMMODITIES

Negatives to Increasing Energy Prices

- Transportation costs
 - Truck
 - Rail

- Viability of Customers
 - NW Paper Mill Closures
 - Aluminum / Steel curtailments
 - Regional Advantages

CREATIVE FINANCING

The Energy Trust of Oregon

- Nonprofit organization to invest for energy efficiency, conservation and renewable energy
- Utilize “Public Purpose” funding
 - 1999 Senate Bill 1149
 - 3% charge on rate of Pacific Power, Portland General Electric and NW Natural
- Industrial Facilities
 - Self Directed - returned a portion of 3% surcharge
 - Custom Projects

CREATIVE FINANCING

- Blue Heron Paper
- \$10 + Million Capital Project
- Increase Recycled Pulp capacity 25%
 - Energy Trust \$5.4 Million
 - Climate Trust \$0.5 Million
 - ODOE \$4.5 Million construction loan
 - BETC/RETC \$2.0+ Million

<http://www.energytrust.org>