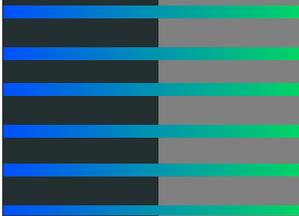


# **Big Rivers Electric Cooperative: A Stranded Investment Case Study?**

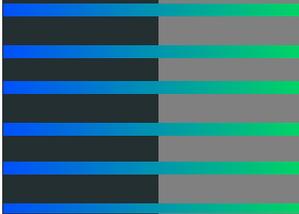
*Robert McCullough  
Managing Partner  
McCullough Research*

# A Paradigm of Conflict



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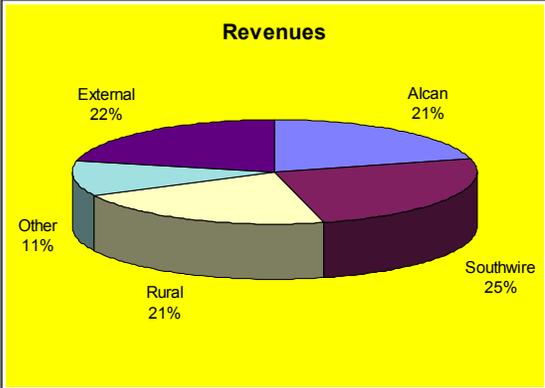
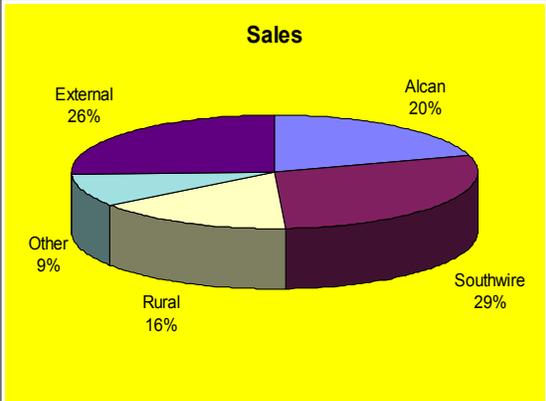
- Overview
- Fundamentals
- History
- Prospects
- Market Value



# BREC Overview

- Big Rivers is a west Kentucky G&T serving 22 counties
- BREC is owned by four member cooperatives
- BREC's load mix is unusual:
  - two aluminum smelters
  - rural Kentucky
  - 26% off system sales
- BREC's debt exceeds most estimates of its net worth

# Revenues and Sales



# Big Rivers Assets

Assets	1994	1993
Utility plant, net	1,040,195	1,050,621
Other deposits and investments, at cost	6,207	5,783
Current assets		
Cash and cash equivalents	10,103	10,073
Accounts receivables	28,251	30,933
Fuel inventory	20,489	18,396
Non-fuel inventory	15,123	14,766
Total current assets	73,966	74,168
Deferred charges	6,766	7,164
Coal prepayments	5,130	5,653
	1,132,264	1,143,389

# Mr. Edwards' Chart

- Big Rivers' value is \$596/kw -- among the lowest on Mr. Edwards' chart

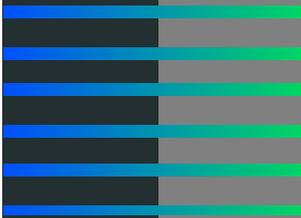
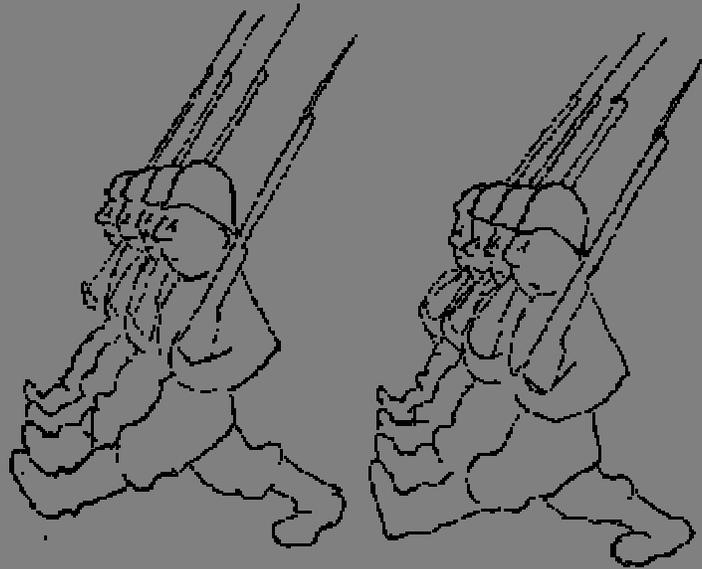
# Big Rivers Liabilities

Equities (Deficit) and Liabilities	1994	1993
Capitalization:		
Equities (deficit)	-249,058	-185,406
Long-term obligations	1,236,558	1,239,754
Total capitalization	987,500	1,054,348
Current liabilities:		
Current maturities of long-term obligations	15,144	10,417
Accounts payable	27,785	21,351
Accrued expenses	17,754	3,919
Total current liabilities	60,683	35,687
Deferred credits:		
Balancing account	30,878	9,186
Unamortized gain on reacquired debt	23,112	24,725
Other	30,091	19,443
Total deferred credits	84,081	53,354
	1,132,264	1,143,389

# Loads and Resources

- 1994 peak load was 1,045 megawatts
- 1994 base load resources were approximately 1,656 megawatts
- BREC also has 243 megawatts of peakers or peaking contracts

# Big Rivers' History



## History at BREC

- The Wilson plant was built in response to a perceived need for power at a projected "synfuels" plant
- BREC has marketed its surplus with some successes since the completion of Wilson
- BREC's two major clients have resisted their share of Wilson's bills since the early 80's

# History Continued

- Big Rivers has recently become embroiled in a number of coal supply related scandals leading to KPSC mandated refunds
- Alcan and Southwire have aggressively pursued these issues
- BREC and its two customers are now parties in a thicket of lawsuits in state and local courts

## More History

- Alcan and Southwire are now backing a municipalization to remove their loads from BREC
- BREC has formed a Special Committee to investigate restructuring and purchase
- BREC is now considering offers from nine possible partners

# Fundamentals

- What is the worth of the assets?
- What is the prognosis for the 49.22% of total sales in aluminum?
- Is Big Rivers' location special?

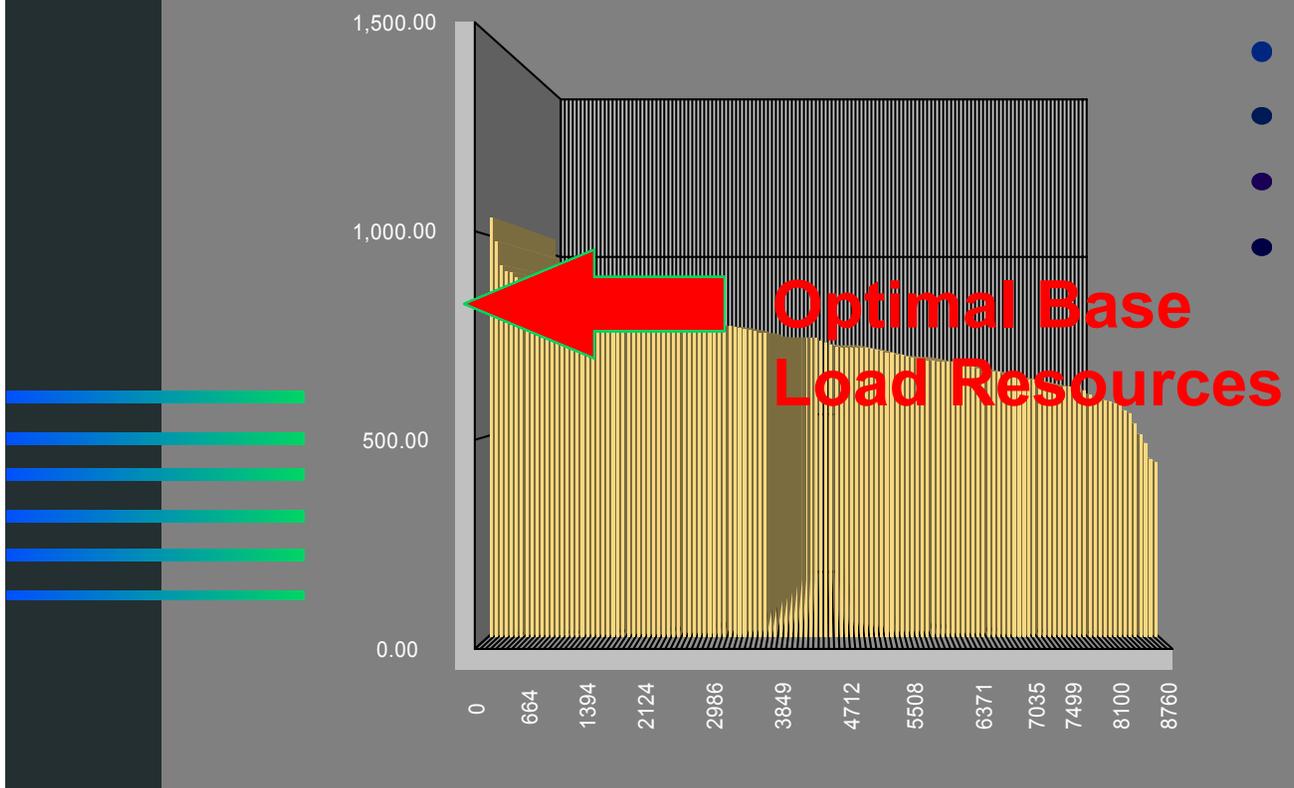
## How much are the assets worth?

- Assuming current loads continue, the only "market value" assets are those surplus to current needs.
- Big Rivers has a surplus of base load plant and a deficit of peakers
- At current combined cycle and peaker cost assumptions, approximately 30% of the plant mix should be peakers

# Optimal Big Rivers Plant

- 30% of total peak (for 1994) is 315 megawatts
- The optimal base load resource is 731 megawatts

# Load Duration Curve



# Big Rivers Portfolio

- Peakers
  - Currently 243 megawatts
  - Required 313 megawatts (before reserves)
  - Required 418 megawatts (after reserves)
- Base Load
  - Currently 1656 megawatts
  - Required 731 megawatts

# Indicated Adjustments

- Purchase 175 megawatts of peakers
- Sell 925 megawatts of base load

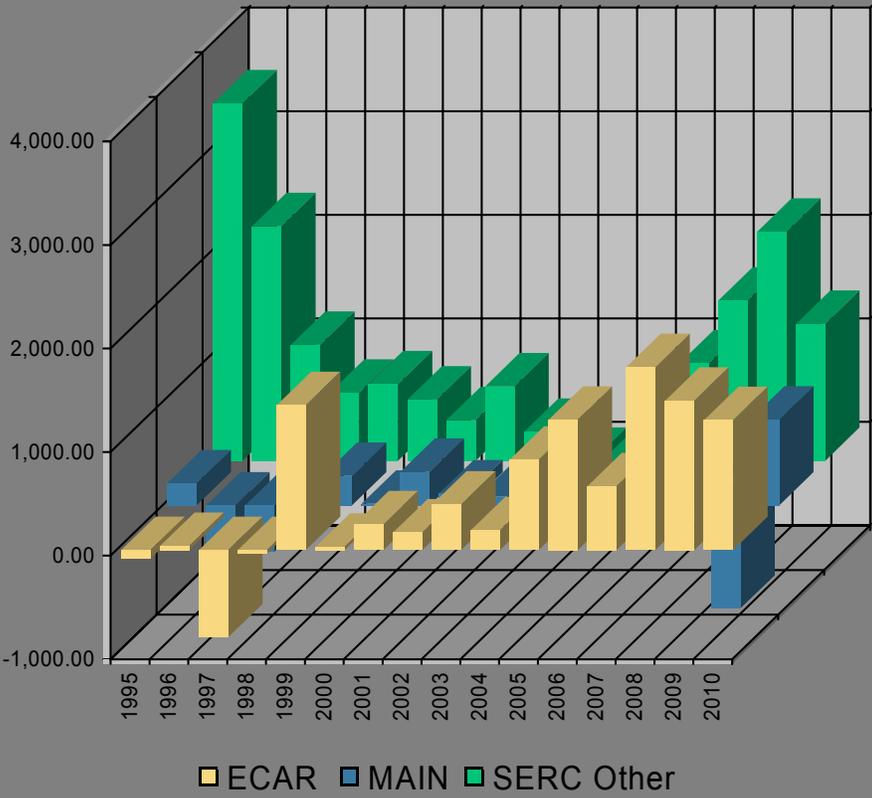
## What are the coal units worth?

- At an average capacity factor of 65%, Big Rivers existing coal units would just equal a gas unit in cost if
  - the coal unit's capital cost was \$1200/kilowatt
  - gas cost 24 mills/kWh (long term)
  - coal cost 14 mills/kWh (long term)
- \$1200/kw times 925 megawatts is \$1.1 billion

# Net Impact

- Sell excess base load for \$1.1 billion
- Purchase peakers at \$70 million
- Net value is over \$1 billion
- Logically, Big Rivers has a positive net value

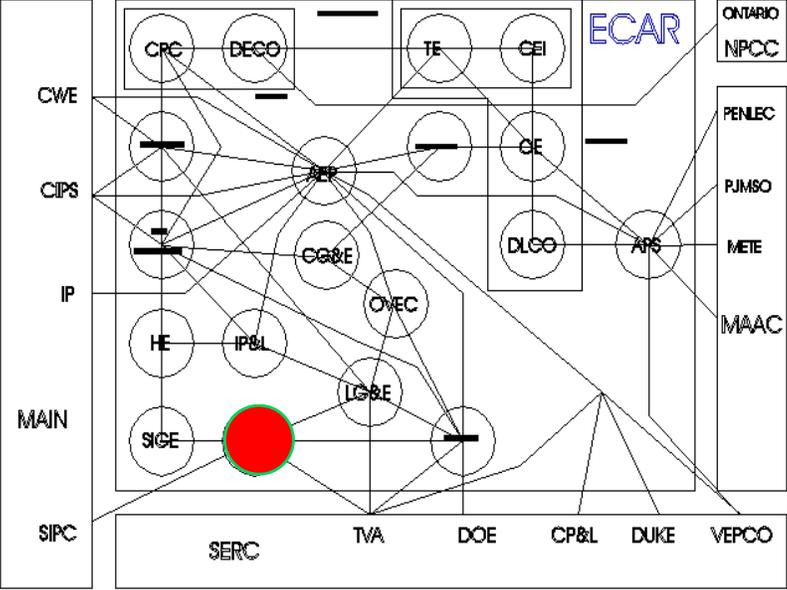
# Regional Resource Additions



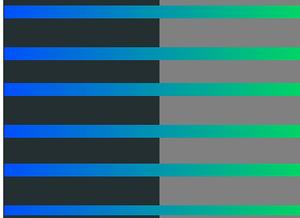
## What is the prognosis for aluminum?

- Recent BPA rates to aluminum are slightly less than 20 mills (real)
- Hydro-Quebec rates are currently 16 mills
- Current Big Rivers aluminum rates are slightly less than 28 mills in comparable terms
- Big Rivers rates are relatively high compared to BPA and Hydro-Quebec

# Big Rivers Location



# Restructuring Offers



# Restructuring Offers

Big Rivers has formed a board committee to consider possible restructuring/merger offers

- In May asked for proposals
- By September, BREC had received nine proposals

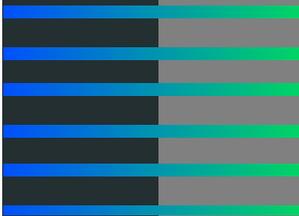
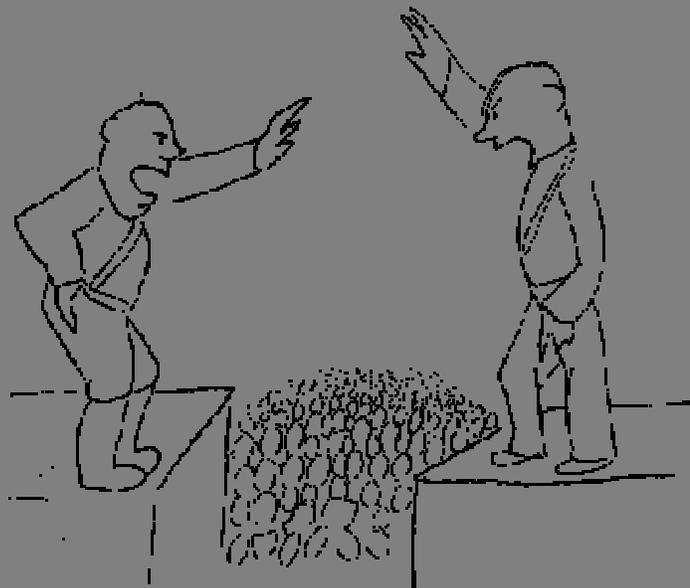
# Possible Bidders

- PacifiCorp (Portland, Oregon)
- Tennessee Valley Authority
- Kentucky Utilities
- Southern Indiana Gas and Electric
- U.S. Generating Company
- East Kentucky Coop
- CINergy
- Louisville Gas and Electric

# Dropouts

- TVA
- Kentucky Utilities
- Reports also indicate that U.S. Generating has not updated its bid in September

# The Future



# Resolutions

- BREC's board is poised to decide "anytime soon"
- The Rural Utility Service has indicated a willingness to restructure the \$1,000,000,000 outstanding debt
- Aluminum electric rates will continue to fall in competing areas