

# **Future Pricing Structure In Competitive Markets**

(Some Ideas To Argue About)

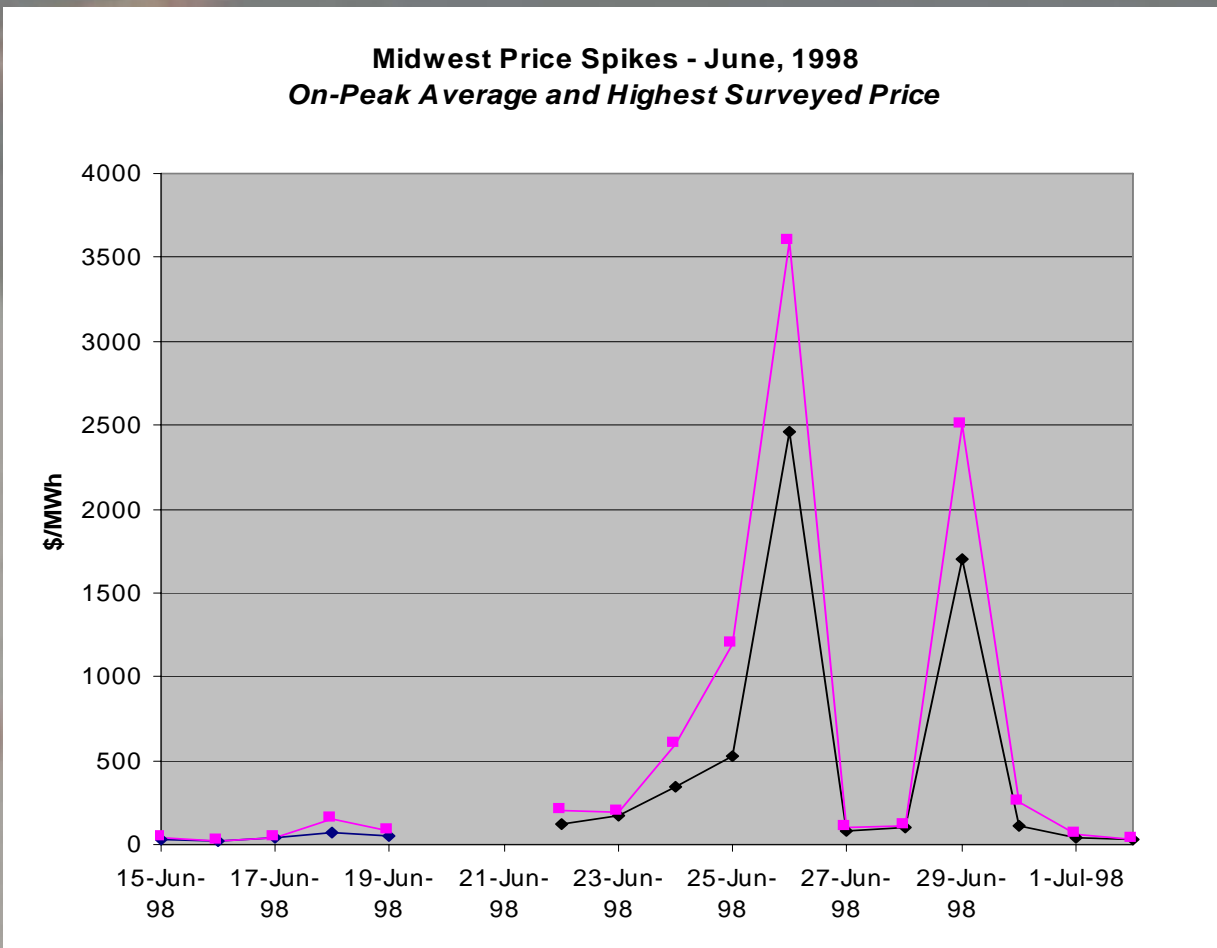
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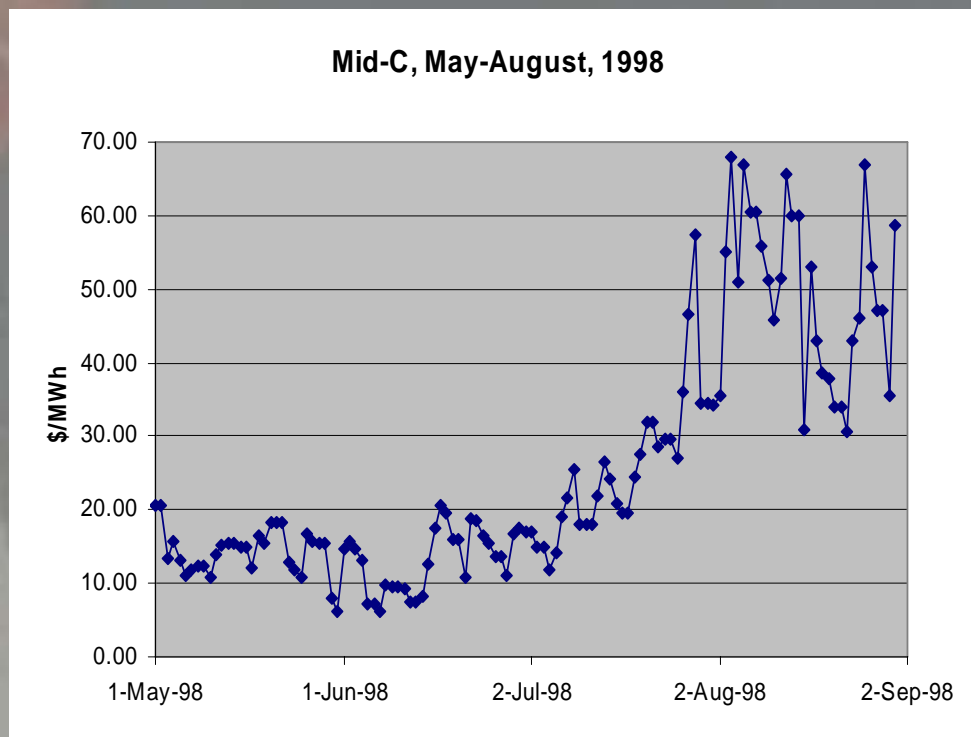


***"... We are  
all  
interested  
in the  
future ..."***

# What Happened In June?

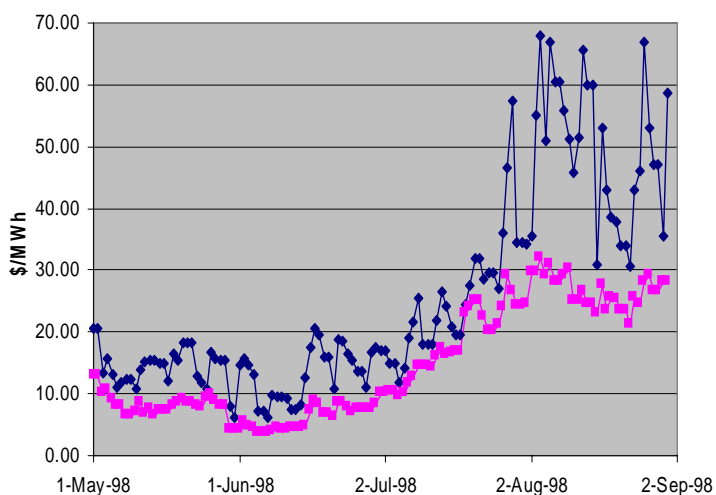


# ... And July And August?

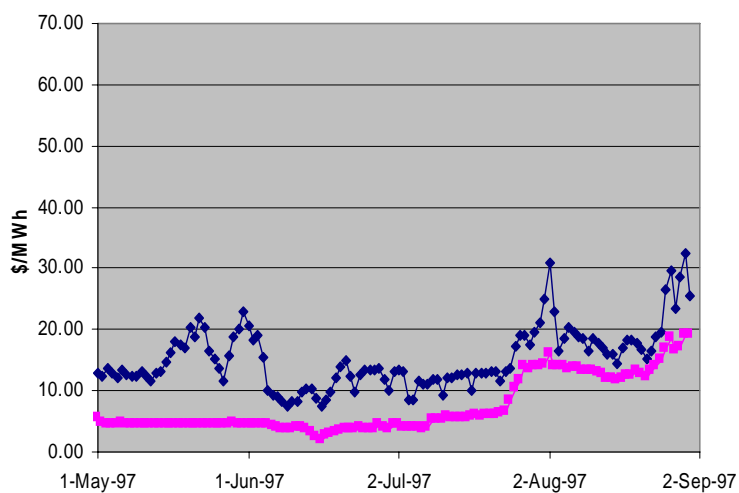


# Is There Something Wrong With This Picture? (on-peak and off-peak)

Mid-C, May-August, 1998



Mid-C, May-August, 1997



# Explanations?

- There really are resources that have a variable cost of \$50, \$150, or even \$1500 per kWh
- Mystical forces
- Gross anticompetitive utility behavior
- Occasional oligopoly
- Market inefficiency from immaturity
- Something else

# The Calculus of Optimal Strategies

- Many Participants
- Participants are Smart - Significant Calculation Capability
- Large Environmental Uncertainties - Loads and Resources
- Endlessly Repeated Decision Opportunities
- Not Much Experience Yet

# Relation to The Prisoner's Dilemma Problem

- Single Iteration is Obvious
- Endless Iterations are Subtle
- Convergence to Best Strategies Takes Time
- Strategic Mix Is More Likely Than Monoculture
- Efficiencies May Be Surprising



# **Are High Prices A Correct "Signal" Indicating A Need For New Capacity?**

- The Theory Says That Variable Cost Pricing On the Margin Is an Adequate Signal - Recent Prices Are Obviously High Above Any Variable Cost
- Most Fixed Costs Are Still Being Recovered Under Terms of Traditional Regulation

# What Pricing Formats Might We See In The Future?

## Possible Components:

- Primitive Fixed Price Bilateral Transactions
- Metered Fixed Price Bilateral Transactions
- Hourly Energy Spot Markets
  - Instantaneous
  - Day Ahead
  - Week Ahead
- Block Energy Spot Markets - On-Peak/Off-Peak
  - Instantaneous
  - Day Ahead
  - Week Ahead
- Same Combinations for Capacity
- "Hidden" Capacity Market
- Curtailment Market

# I Hazard A Guess

- Generation Companies The Norm
- Thicker Spot Markets ...
- ... But Non-Spot Still Predominates
  - Separate Capacity and Energy Charges
  - Planned Total Cost Recovery
  - Slightly Higher Returns
  - Diurnal and Seasonal Shaping
- Spot Markets Less Volatile than Summer 1998
- But More Volatile Than In the Past
- Spot Displaced Above Marginal Cost
- Rapid Incorporation of Technical Advances
- Efficient Use of Capacity
- No Curtailment Markets

# The Soft Ice Cream Metaphor



- Electric Power as "Stuff"
- Expensive Machines
- Cheap Materials
- On-The-Spot Consumption
- Capacity Surplus
- Priced by Amount
- Priced Higher Than Marginal Cost - Generous Markups
- Intense Vendor Competition
- Consumers Enjoy Low Prices