The Midwest Power Supply Crisis of June 1998

Discussion of STAFF report by:
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TP5: Distribution Networks
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The Region in Question

ECAR: East Central Reliability Agreement
Image obtained from www.nerc.com
Warning Signs...

- May 1998: North American Reliability Council (NERC) issues a warning
- NERC (1998 Summer Assessment) predicted an increase in ECAR peak demand of 4.6% from 1997, with an excess power capacity of 11%
- At the start of summer, Midwest had over 11,400MW of capacity out of service
- Mid-June temperatures soared to levels 6–9 °F above normal

The nature of the crisis

- 24th June: A small marketer defaulted leading to cascade of defaults in the supply network
- Utilities and marketers start bidding for power to meet their supply obligations
- Situation worsened by tornado damage to 3 transmission lines, leading to shutdown of a nuclear power plant.
The nature of the crisis (con’t)

- June 25th: Little power available for sale; Further outages reported
- Transmission constraints limit available help outside the Midwest
- Utilities cut power to interruptible customers, and urge others to conserve
- Prices soared: Power sold in the range of $35–6000 per MWh

Characteristics of the Wholesale Power Market

- Recently deregulated market
- Regional in nature: Exacerbated by transmission limitations
- Largely Decentralised: No organised exchange structure, with a great deal of over-the-counter purchasing
- Inability to support ‘smaller players’
Characteristics of the Wholesale Power Market (Con’t)

- Rife with Subsidies: During periods of lower demand, prices do not reflect the cost of generation
- Many complicated trading transactions: Greater risk of default among market participants
- Forwards and Futures contracts
- Poor Risk Management: Lack of preparedness for any impending capacity shortage

Explaining the Surge in Prices: The Usual Suspects

- Severe heat wave: Led to an increase in demand
- Limited regional power generation capacity
- Damaging storms further reduced output
- Nature of the market: Competitive forces at work
Market Forces: Simple case of Supply vs. Demand?

- Did the default of power traders play a role?
- Physical vs. Financial Market
- A reflection of utility demand?

Market Forces: Simple case of Supply vs. Demand? (con’t)

- Accusations of ‘Gouging’
- Lack of foresight and contingency
- Need for retail deregulation
Conclusion: Is Deregulation the Answer?

- Market behaved as expected in an extremely competitive wholesale environment.
- Short-term ‘price spike’ vs. increasing generation capacity
- Deregulation at the retail level is “implausible and naïve”

Conclusion: Is Deregulation the Answer?

- Recommended establishment of Independent System Operators (ISOs)
- Market evolution should better enable participants to react to price signalling
- Improved use of Risk Management tools
THANK YOU!!

Questions??