

EIA data and evaluating electricity restructuring

James Bushnell

University of California Energy Inst.

www.ucei.berkeley.edu

Outline

- **Shameless flattery**
 - Why EIA data are so important
- **Why are people so unhappy?**
 - With electricity restructuring
- **What EIA data have helped us learn**
 - Production efficiencies
 - Market efficiency
 - Market competition
 - Environmental compliance

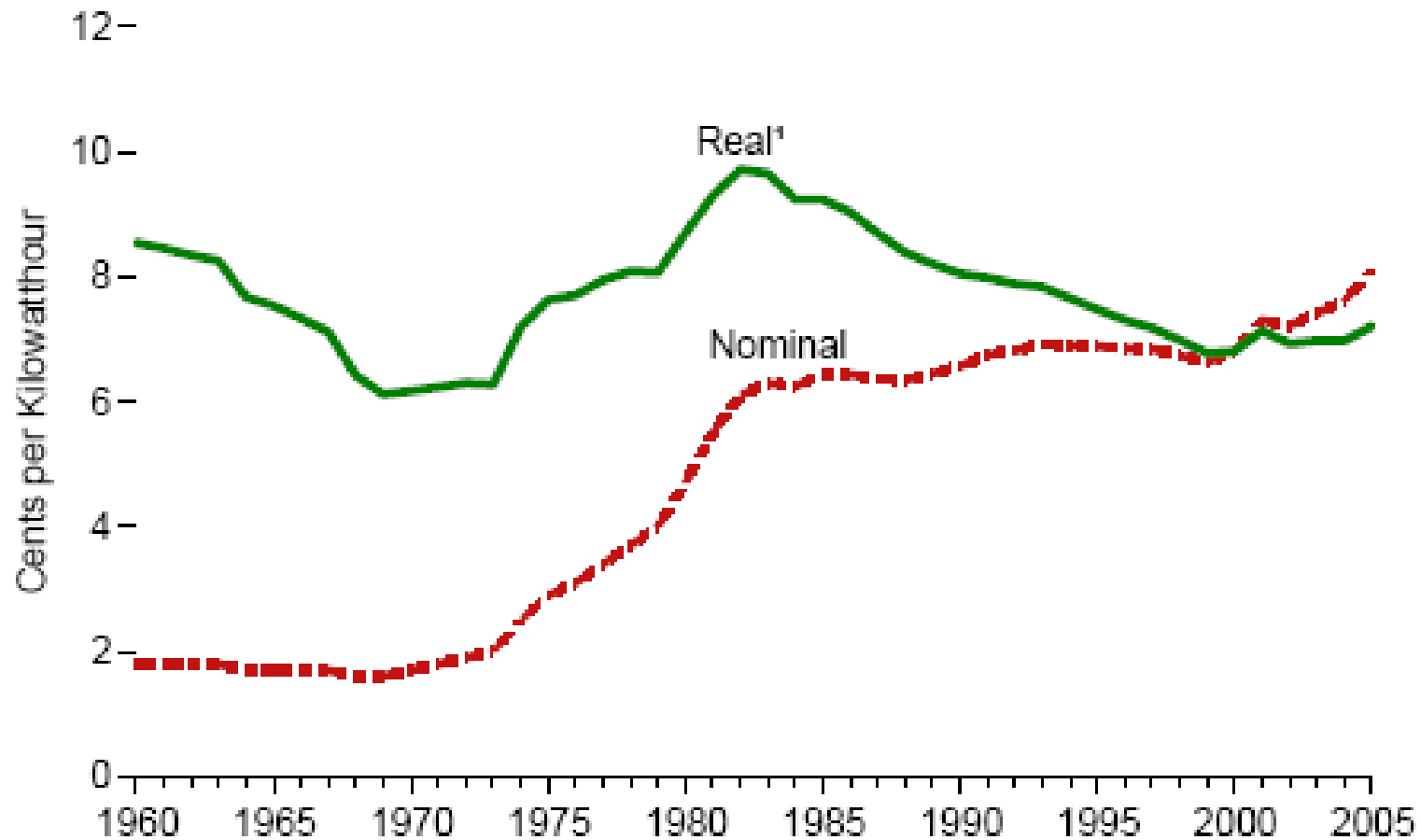
Why EIA is so important

- **Important industries undergoing historic changes**
 - Restructuring/deregulation
 - Environmental regulation and markets
- **We know much more about these industries than others where data are not collected**
 - And much more than the europeans know about their energy industries
- **Academics and economists flock to data**
 - Much more “open source” knowledge about the functioning of these markets

Why are (some) people so unhappy with electricity restructuring?

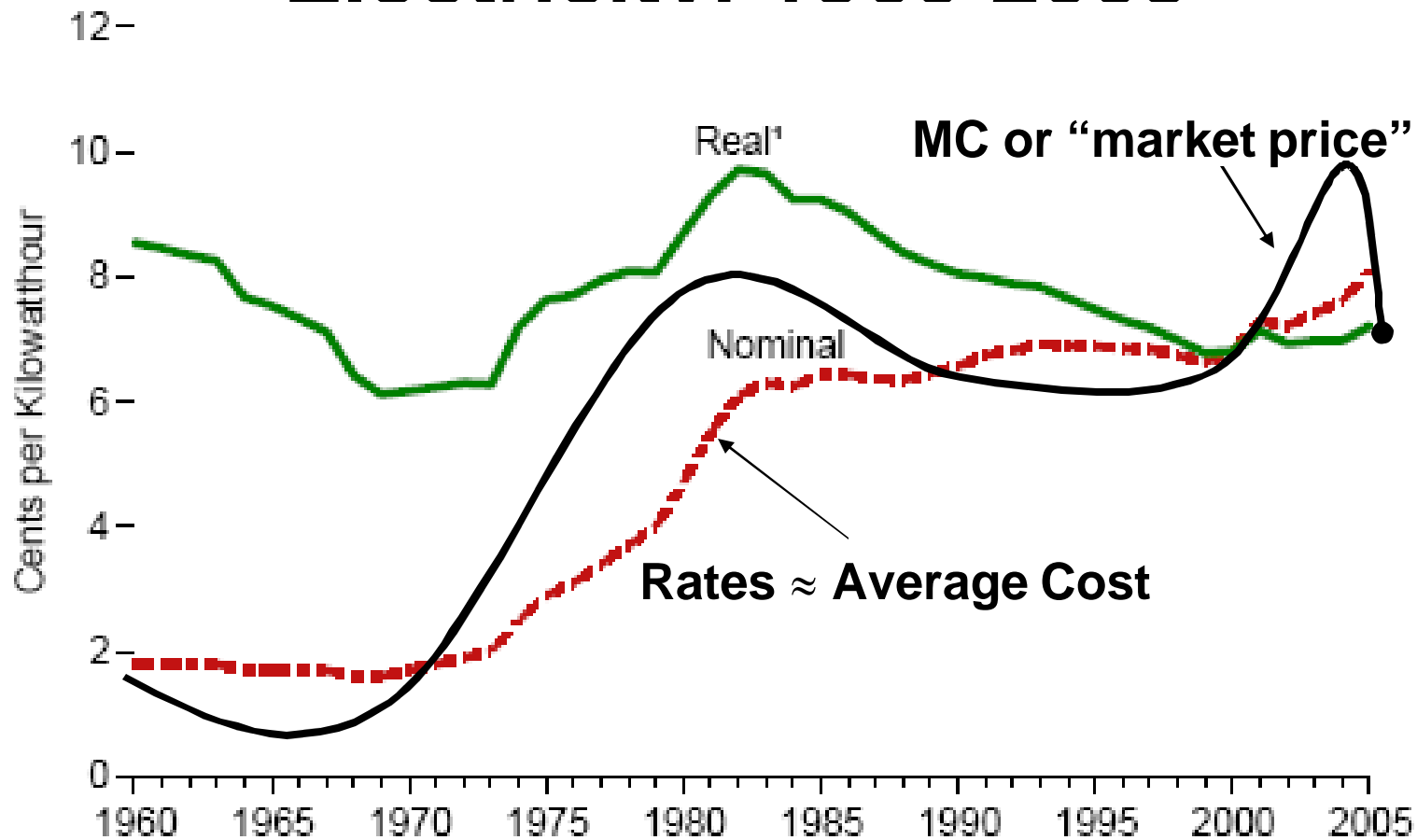
- Over the last decade things have happened
- Many electricity markets have restructured
- Electricity prices have risen
 - Often more than in regulated states
- But why?
 - And what does this mean for restructuring in general?
 - Distinguishing the pricing impacts of restructuring
 - The “market timing” problem
 - » sold coal and nuke plants at the wrong time

Average Retail Price of Electricity, 1960-2005



Source: EIA, http://www.eia.doe.gov/emeu/aer/pdf/pages/sec8_38.pdf.

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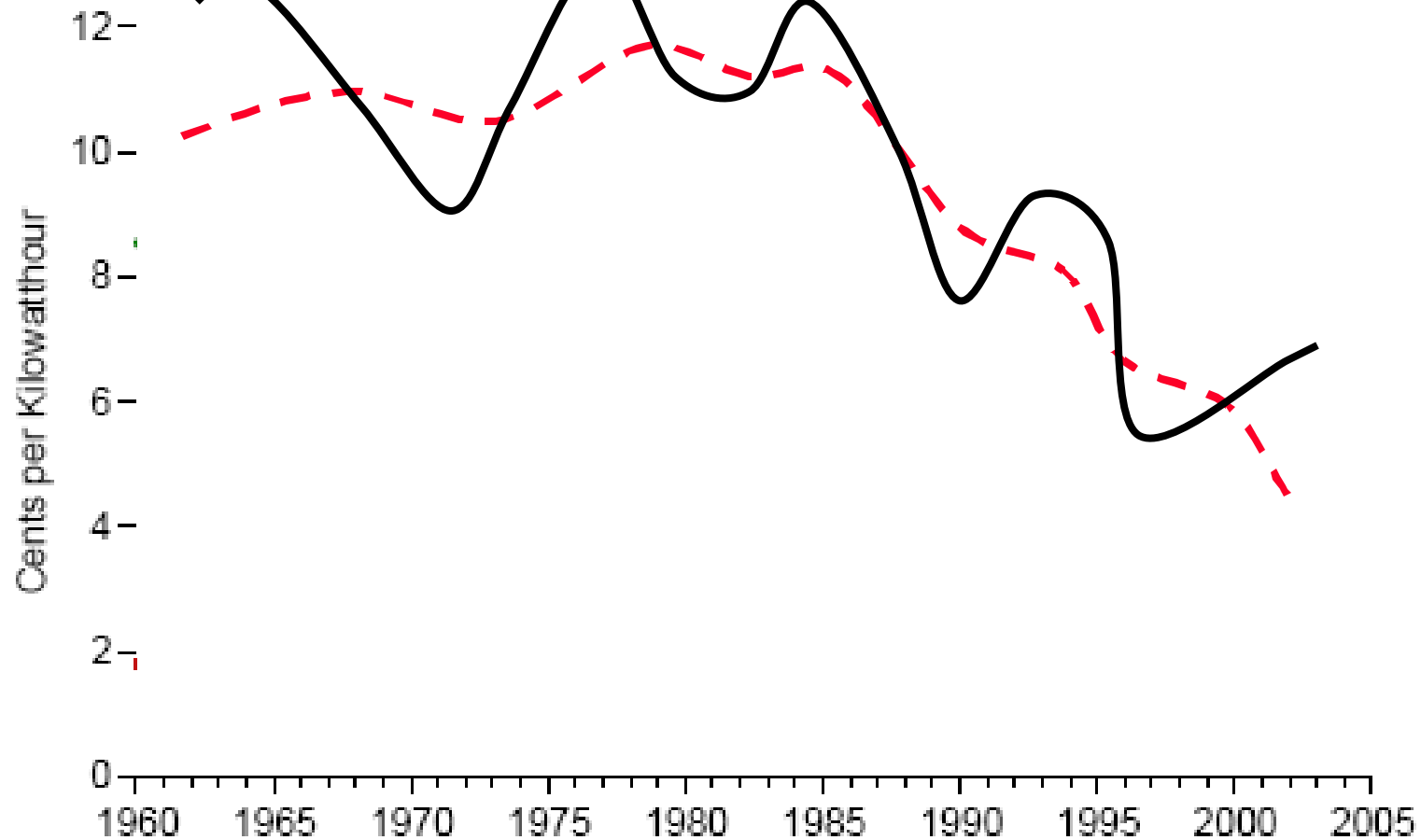


Source: EIA, http://www.eia.doe.gov/emeu/aer/pdf/pages/sec8_38.pdf.



Source for Black Line: Artists Rendering (I.e. I made it up)

Theoretical (hoped for) Impact of Restructuring: both costs go down

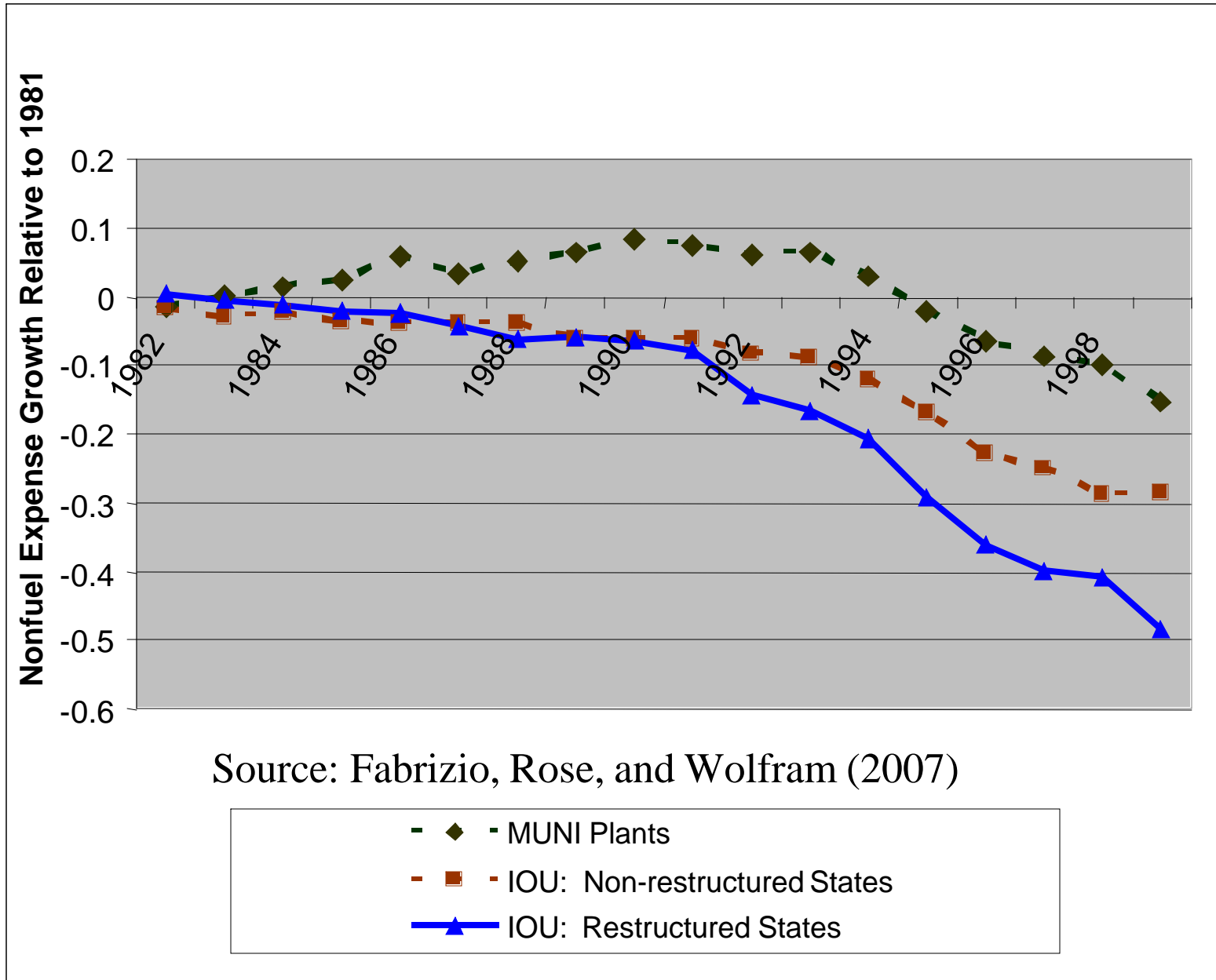


Source: Completely fictional data made up by me.

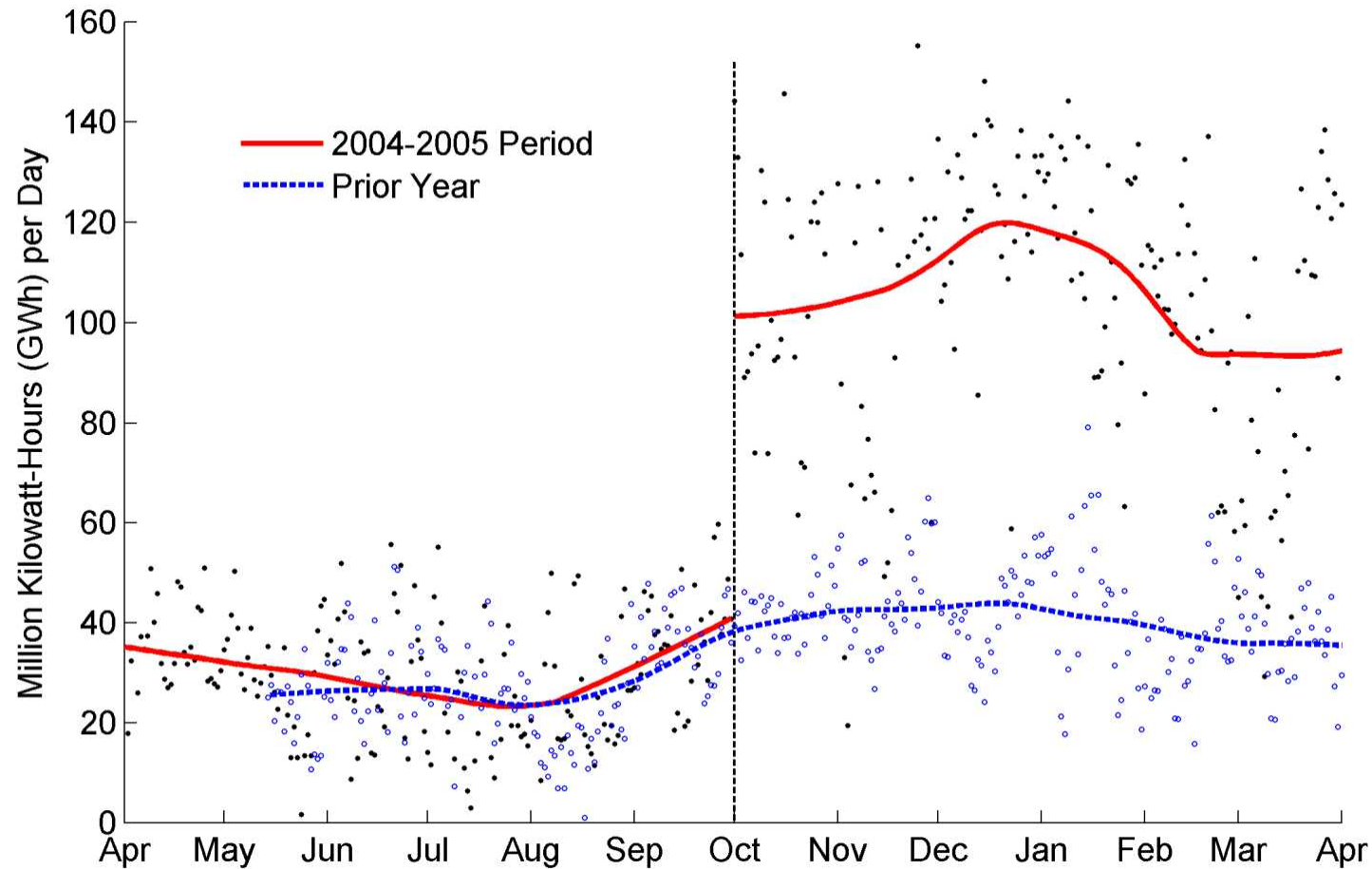
Studying the component parts (A bottom-up approach)

- **Productive Efficiency**
 - Operating costs (heat rates, employment, etc.)
 - Dispatch efficiency
 - Investment choices and costs
- **Market Efficiency**
 - Do prices equal short-run MC plus scarcity *when there is scarcity?*
 - Are capacity markets giving us the right prices for scarcity?
- **Competitiveness**
 - Do prices reflect long-run marginal costs on average?
 - Are prices close to short-run MC plus scarcity

Figure 2: Nonfuel Expense Trends by Company Type and Restructuring Status

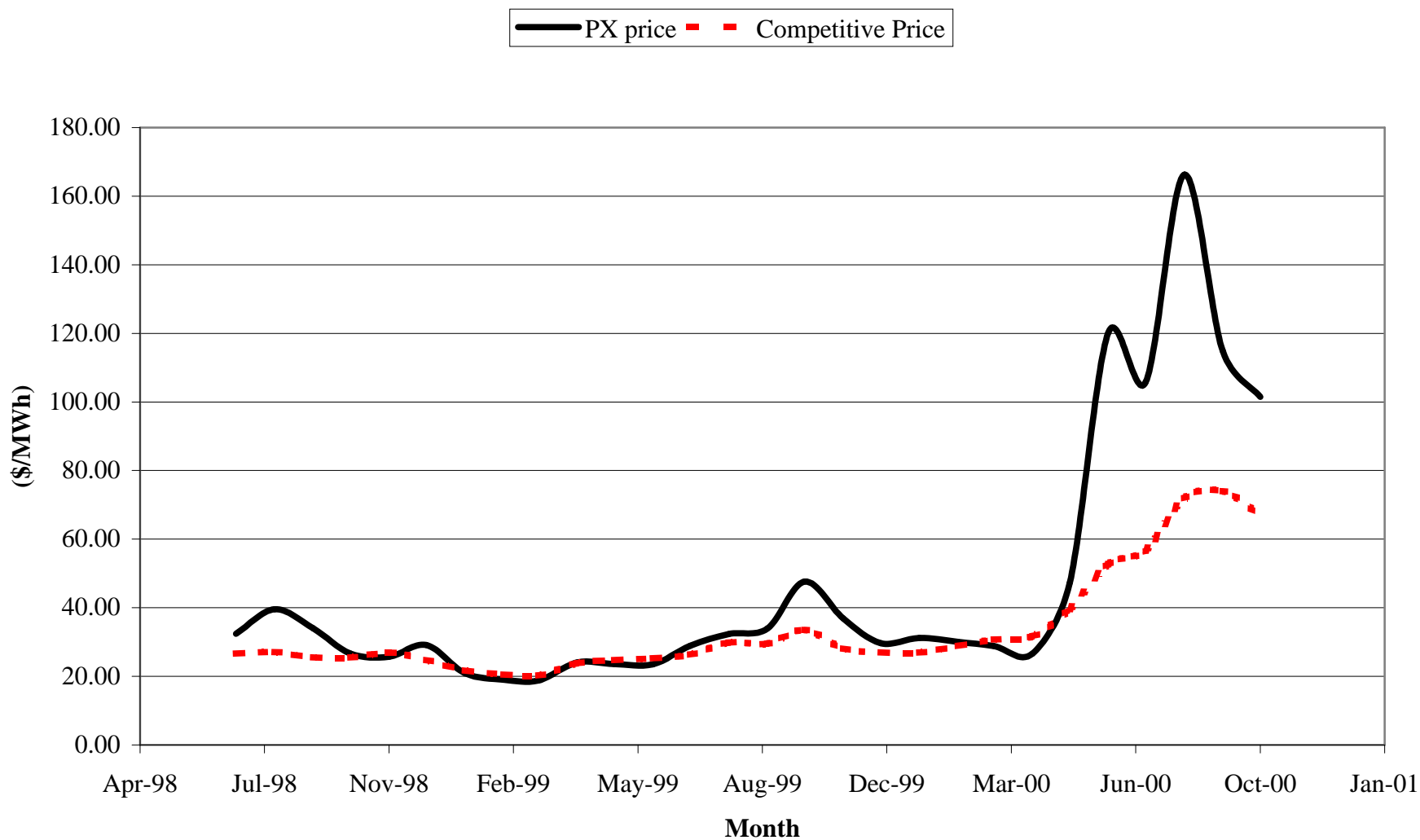


Impact of PJM Expansion: Day-Ahead Net Exports, Midwest → East



Source: Mansur and White, 2007

Average California PX price and MC



Summary

- **When we make major policy decisions about important industries, it helps to know what is going on in those industries.**
- **High quality, publicly available data are critical for our understanding of how these industries work and continue to evolve.**
- **Thanks to the EIA**