

Supporting the Infrastructure: Has Deregulation Helped or Hurt?

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**U.S. DOE, Energy Information Administration
2009 Energy Conference**

**Electric Power Infrastructure:
Status and Challenges for the Future**

**Washington, DC
Apr. 7, 2008**

Has opening markets promoted infrastructure?

- **Was commitment to opening markets realistic?**
 - Energy on-peak can be enormously expensive
 - Everyone gets to charge high price
 - Good economics; contentious politics
- **Do consumers fit the textbook?**
 - Revealed preference not to have to choose?
 - Will dim consumers lead to dim lights? Energy efficiency ...
- **Restructuring vs. investment?**
 - Does divestiture help or hurt?
 - Necessary for competition
 - Short run pricing
 - Long run coordination

Reliability, and reregulation

- **Reliability vs. Competition?**
 - Non-storability + interconnection => central dispatch, control
 - Aug. 14, 2003: Who's to blame in an interconnected grid?
 - Best sign: We're arguing about prices, not blackouts (so far!)
- **Finally, some words on what's going on in Maryland**
 - State of paradoxes
 - Price and use?
 - Conserve or produce?

Political intolerance for peak power prices?

- **Extreme peak costs can exceed average by 50-100**
 - ONT: 15% of capacity during 125 peak hours, < 1.5% time
- **Regulation: Peak cost buried in average price**
- **Markets: All capacity gets to sell at peak prices**
 - Economics sees this as a virtue
 - Data showing high prices with open markets may be good!
- **Massive short-run redistribution**
 - The unforeseen problem in California
 - High retail rates => retail re-regulation => distribution utility bankruptcy => market gone
- **Will entry fix the problem? Will public wait?**

Behavioral issues: Do consumers really want it?

- “What if they gave a [market] and nobody came? Life would ring the bells of Ecstasy and Forever be Itself again?”
 - paraphrase of quote attributed to Allen Ginsberg
- “Who let those people break up the phone company?”
 - Tim’s dad, whenever occasion allows (1984-present)
- “The best policy is to declare victory and leave”
 - Sen. George D. Aiken (R-VT), 1966, about the Viet Nam War

Alberta:

Comparative Electricity and Natural Gas Shopping Worksheet

Name of energy supplier	
Contact name	
Phone number	
Energy supplier type (competitive retailer/regulated service provider)	
References of supplier (e.g., Existing customers, Better Business Bureau, credit references, etc.)	
Is there a basic service charge, even if I don't consume any electricity or natural gas?	Yes/ No
What is the fixed rate?	\$
What is the variable rate?	\$
What is the energy charge per kilowatt-hour (kWh) or per gigajoule (GJ) (Gas Cost Recovery Rate for Natural Gas)	\$ /kWh or \$ /GJ
Are there price breaks for different levels of consumption?	Yes No
Any built-in price increases? (Electricity Only)	\$ /kWh Date:
If yes, amount and when.	
What are the retail service fees?	
Are there additional components to the energy charge? (Electricity Only)	Yes No
Unaccounted for energy	If Yes, explain:
Pool service charge	
Distribution loss charge	
Is there a premium for green power? (Electricity Only)	Yes No
Terms of the agreement?	
What does the clause concerning supply interruption indicate?	
Does the price depend on the time of year that I consume electricity or natural gas?	Yes No
Does the price depend on the time of day that I consume electricity? (Electricity Only)	Yes No
What is, if any, the switching fee or other up-front charges?	\$
What are the exit provisions for cancelling the contract?	
Are there meter-reading fees?	Yes No
How frequently will I be billed?	
Can you bill me at a regular date of my choice?	Yes No
Am I buying anything other than electricity or natural gas?	Yes No
Are services available to help me use electricity or natural gas more efficiently?	Yes No
Who will inform my previous gas supplier about my new arrangement?	
Who do I call if I have questions or problems?	
Contact: Retailer number	
Is the price/supply tied to a specific electricity generation plant? (Electricity Only)	Yes No
What occurs in the event of an outage at that plant? (Electricity Only)	

Disclaimer: The contents of this worksheet are only suggestions of possible considerations for consumers. This worksheet is not intended to be a comprehensive guide nor is it a substitute for your own judgment. The Government of Alberta makes no warranty or representation of any kind in respect of the contents of this worksheet and has no liability for any damages that may be caused to any person in connection with or arising out of the use of this worksheet.

Shopping in Pennsylvania

Shopping is easy

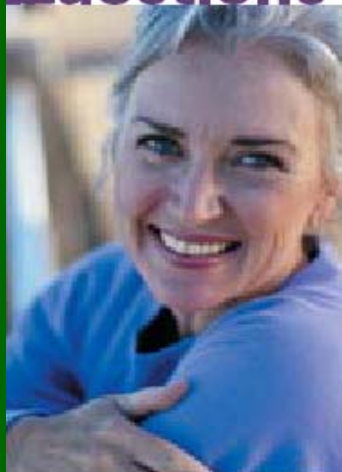


How to Shop for an Electric Generation Supplier:

1. Using the chart on the opposite page, enter the supplier's name on the top line and write your electric distribution company's price to compare on Line 1. This price is given in cents per kilowatt hour (kWh).
2. Call each electric generation supplier to find out what price they are offering for their electric generation, or refer to the Office of Consumer Advocate (OCA) pricing list. Write that price on Line 2. See the checklist on the back of this brochure for other questions to ask suppliers.
3. For you to save, the supplier's price must be lower than your present provider's price to compare. Subtract the new supplier price from the present price to compare and write that number on Line 3.
4. Write the average number of kilowatt-hours (kWh) your household uses in a month on Line 4. This can be found on your current electric bill.
5. Multiply Line 3 by Line 4 and put that number on Line 5.
6. Divide the subtotal by 100 to calculate your savings per month in dollars and cents (Line 6).
7. Some suppliers charge a monthly fee in addition to the charge for generation. If the supplier charges a fee, write the amount on Line 7. If the supplier does not charge a monthly fee, put a zero on Line 7.
8. Subtract the monthly fee from your savings per month (Line 7 from Line 6) and enter this on line 8. This will show you what your "Final Monthly Savings" may be. You can then easily compare prices like you would with any other product like gasoline and groceries.

A few simple questions

Questions to Ask Electric Generation Suppliers:



What is your price per kWh? (Enter price on Line 2 of Comparison Worksheet.)

Is your price fixed or does it depend on time of day or usage?

Can your price change? If it can change, when can it change and how will I be notified?

What is the length of the agreement?

Is there a cancellation fee?

Are there any other fees, such as a monthly service fee?
(Enter monthly fee on Line 7 of Comparison Worksheet.)

Will I receive one bill or two?

Is there a bonus for signing up with you?

Do you offer a choice of energy sources, such as renewable energy?

Do you offer any other services?

Contact name and phone number?

Customer service hours?

Monthly savings? (Enter amount from Line 8 of Comparison Worksheet.)

Smart grids, but what about the users?

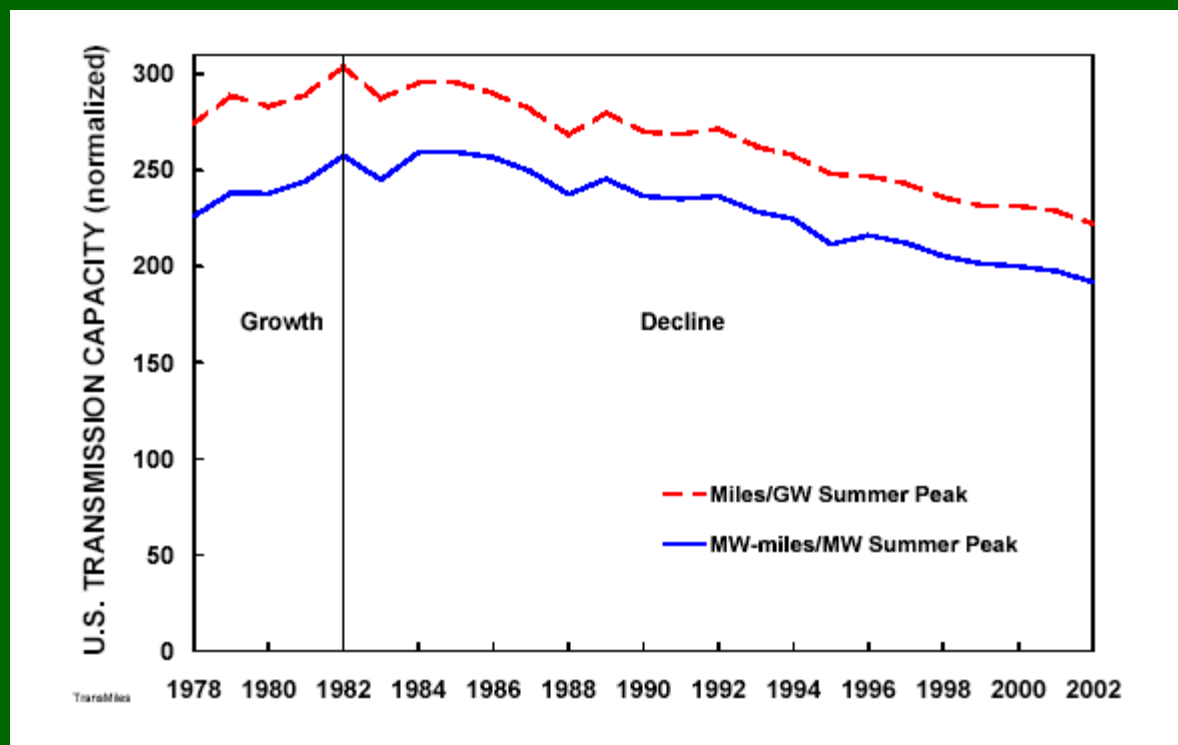
- Many aspects of energy efficiency well known
 - Compact fluorescent lights
 - “Negative cost” carbon controls
- So too, the smart grid
 - Top 15% of capacity used less than 1-2% of the time
 - Real-time use management
 - Need not just metering but monitoring and adjustment
 - Utility management, automation could reduce costs
- Why are these \$20 bills all over the sidewalk?
 - Consumers don’t have “the information”?
 - Utilities withholding the information?
- Return to this theme at the end

Leave which investments to the market?

- **Residential consumers less interested in the hassle**
 - “Why are you making me choose”?
 - Very low take up rates despite education, unless large incentives/penalties
- **Forcing competition where it doesn’t fit?**
 - Franchise competition to be “default provider”?
- **Success for industrial, commercial users**
 - MD – 2% residential, but
 - > 69% C&I, 94% “large customers”
- **Declare victory for 2/3 of the market ready to choose?**
 - Offer residential users energy at controlled prices
 - Efficiency: Even more information, or mandatory investment?

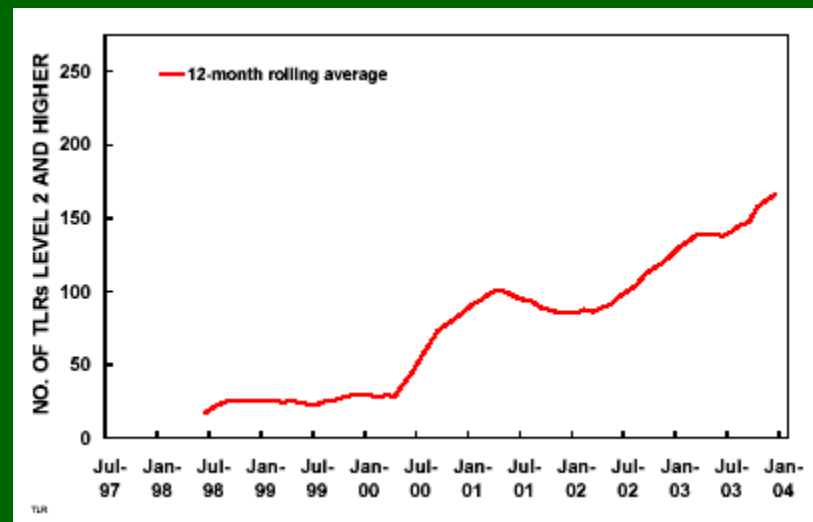
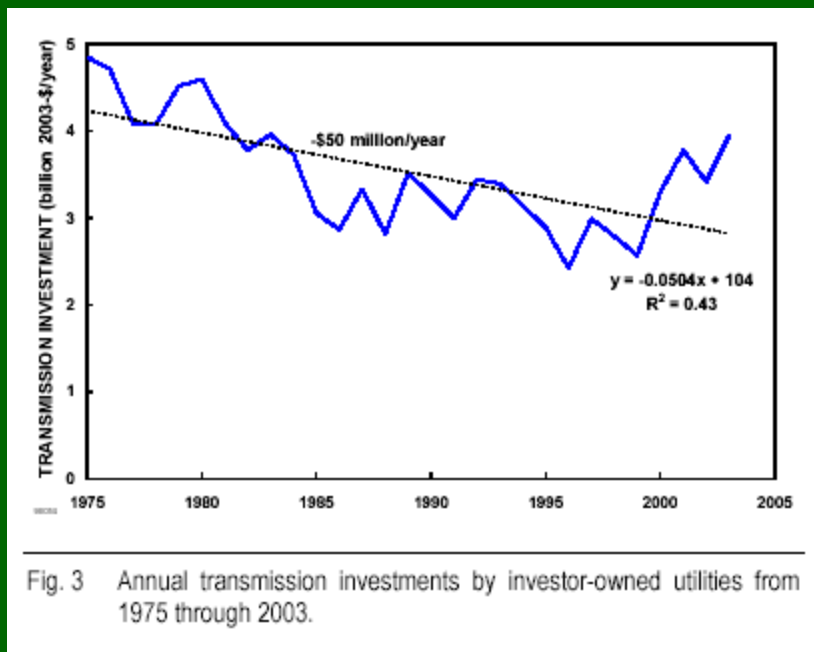
What about transmission? Is capacity adequate?

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- Transmission growth rates below generation growth
- Grid not designed for interstate wholesale markets
- August 2003 blackout

Other evidence: investment trends, TLR growth



Is “restructuring” the problem?

- Can’t simply deregulate: Monopolies in “wires”
- Incentives to evade wires regulation without separation from generation, marketing
 - Justify if not divestiture, the “I” in ISO:
 - Can antitrust come to the rescue? Not after *Trinko*
- But does separation, independence work?
 - Vary transmission price with generation use? Congestion
 - Timing of unit installation, expansions?
- Can we get the right investment?
 - Need to coordinate major generation, transmission investments? -- Wind, solar even more
 - What’s the point of competition if entry requires planning?

Institutions: reliability vs. competition

- Crucial, fragile, interconnected:
Electricity's unique combination
- My reliability affects your reliability:
 - The August 2003 blackout example
 - A policy rationale for a “smart grid”!
- Valuing security
 - What does a blackout cost?
 - Infinite investment in transmission, generation?
- How much central control necessary?
 - Just an air traffic controller?
 - Or complete management of dispatch and investment?

Good news, but stay vigilant

- So far, reliability not threatened
 - Despite trends regarding transmission
 - (Vague?) Accusations regarding post-emergency restoration
- Arguing about price instead of blackouts a good sign
 - Doesn't Lehman wish its profits had just fallen 25%?
- What happens if there's another Aug. 2003 blackout?
 - Claims of disaster in 2011-12 in MD
- Reliability as a collective good could justify at least some smart grid investment
- But policy not out of the woods

Which brings us to Maryland ...

- The two pillars of Maryland electricity policy:
 - (1) The price is too high
 - (2) People buy too much
 - Requires consumer irrationality
- More paradoxes: Conserve or produce?
- EmPower Maryland
 - Reduced electricity use 15% by 2015
 - Join RGGI; use permit revenues to fund efficiency
- But re-regulate – Why? **TO BUILD MORE PLANTS!**
 - Ban independent entry, erase large user gains?
 - Why weren't plants build? 15% demand reduction, maybe?
- Get me the aspirin!!

Read more about it?

Generating the Benefits of Competition: Challenges and Opportunities in Opening Electricity Markets, Toronto: C. D. Howe Institute, Commentary 260 (April, 2008)

“Consumer Preference Not to Choose: Methodological and Policy Implications,” *Energy Policy* 35 (2007): 1616-27.

“Alleged Transmission Inadequacy: Is Restructuring the Cure or the Cause?” *Electricity Journal* 19, no. 4 (May 2006): 42-51.

“Making Electricity Markets Competitive: How Fast and By Whom,” in Portney, Paul and Richard Morgenstern (eds.), *New Approaches on Energy and the Environment: Policy Advice for the President* (Washington: Resources for the Future, 2004): 38-43.

“Market Failures in Real-Time Metering,” *Journal of Regulatory Economics* 26 (2004): 119-39.

“Electricity Capacity Requirements: Who Pays?” *Electricity Journal* 16, no. 8 (Oct. 2003): 11-22.

“Mismeasuring Electricity Market Power,” *Regulation* 25 (Spring, 2003): 60-65.

Alternating Currents: Electricity Markets and Public Policy (with Karen Palmer and Salvador Martinez), Washington, DC: Resources for the Future (2002).

The California Electricity Experience, 2000-2001: Education or Diversion? Washington, DC: Resources for the Future (2001).