

# The Good, The Bad & the Ugly: Reconnecting the Dots of Resource Procurement

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# The Good Old Days

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- Vertically bundled, fully regulated industry
- Utility in position to “see” all the costs and benefits of the system
  - Generation, transmission & distribution trade-offs visible between all three
  - But not always captured
- Stable prices and costs
- All resources could be valued, but not always done
- IRP offered rational framework for decision-making



# The Bad Old Days

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- IRP mistakes (some real, others just perceived)
  - Had long-term, life of plant, impact
- Rate Cases viewed largely as zero-sum game
  - Utility versus customer
  - Customer class versus customer class
  - No “value” opportunities generally sought or found
- Externalities ignored



# The Ugly Present

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- Like democracy, markets are messy:
  - Volatile prices
  - Capacity and reliability uncertainty
  - Risks not allocated to those who are best suited to bear them
- And fraught with misperceptions:
  - “Spot” market is the “real” and “only” market
  - It costs money to go “long”
  - Invisible hands will deliver all economic products
- Markets have no “public interest” component



# Current Markets: Reality Check

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- Built around narrow energy-only products
- Have poor or non-existent demand functions
  - Demand curve poorly defined
  - Demand response mechanisms still lacking
- Struggling with capacity and reliability products
- Struggling with distributed resources (generation and demand response)
- Largely incapable of valuing and delivering, on a “market” basis, the most cost-effective and important available resource: energy efficiency



# Current Markets: Discombobulated Values

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- Separation of generation, transmission and distribution “intelligence”
- Generation, transmission & distribution
  - Each have own set of problems
  - Values and solutions now seen only within their own sphere
- No market or regulatory mechanism for trade-offs between generation, transmission & distribution
- Previously “bundled” values
  - Can sometimes be glimpsed, but rarely captured
  - More often are hidden altogether



# Consumer Priorities:

## Is The Traditional View Still Valid?

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- Fighting prices is a short-run “case to case” strategy
- Market-based pricing has drastically increased volatility
- Environmental and other externalities are emerging as major issues that can no longer be ignored



# Energy Efficiency: Consumer Advocates' View

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- Historically have often opposed energy efficiency investments over fears of higher consumer prices
- Advocates often use RIM “no loser” test
  - Ignores the “losers” when there is no efficiency investment
  - Makes losers of us all in the long-run
- But can be penny-wise and pound-foolish position
  - Ultimately bills are more important than prices
  - And total cost to consumer is more important than utility bill
- Consider: current efficiency targets are often in the 1% of load range
  - 20% of load over twenty years
  - Compute savings if system capacity were 20% smaller
  - We could have (and should have) done this twenty years ago!



# The Crocodiles of Denial Will Eventually Get You

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- Consumer is also the taxpayer and the (ultimate) healthcare payer
- Annual externality cost are real and large:
  - Premature Deaths: 23,600
  - Hospital Admissions: 21,850
  - Heart Attacks: 38,200
  - Asthma Attacks: 554,000
  - Lost work Days: 3,186,000
  - Total Annual Cost: \$167.3 billion



# Identifying *All* Costs, Benefits and Risks of Power Supply

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- Price
- Price volatility
- Fuel availability
- Impact on reliability
- Environmental costs
  - Carbon
  - Health
- Collateral system costs
  - Transmission
  - Distribution



# Shop and Compare: Where's the Market?

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- Supply and Demand trade-offs
  - Load management
  - Demand response
  - Energy efficiency
  - Important whether you have “competition” or not
- Fully value demand side resources, including energy efficiency
  - High bills with low prices are worse than low bills with high prices!



# Is Carbon Cap and Trade In *Your* Future?

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- Current activities include West Coast and Northeast “RGGI” initiatives
- State-level, regional efforts to address greenhouse gas issues
- Likely prelude to national policy on carbon



# Characteristics of Cap and Trade

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- Existing cap and trade systems like SO<sub>2</sub> allocated allowances to generators
  - Not a “use or lose” permit
  - Generator will either generate (and pollute) or not generate and sell the allowance – either way will demand the “value” of the credit as a revenue
- Results in market prices (and therefore revenues) to generators rising by the value of the allowances
  - Obviously good for renewable resources which have higher revenues and no compliance costs



# But...

## In Competitive Markets

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- Anytime credits “used” they have “value”
- All production gets higher clearing price equal to that marginal producer’s value
- Higher prices applied to base (free permit) production
- Worst of all: Generator Allocations are costly!
  - Results in windfall to polluting generators
  - \$1 billion or more annually in Northeast



# A Better Approach: Allocate Allowances to Load

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- Allocate to Loads (i.e. Load Serving Entities)
- Prevents windfalls to polluters
- Generates revenue stream for public benefits
- Fits tightly with RPS and Portfolio Management
- Best for customers when all given to LSEs but can be mixed with generator allocations up to point where windfalls would occur



# Focus On the Right Issues

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- Accept that markets don't yet work the way they should and work to overcome market failures
  - Fixing markets distracts from mitigating their failures
  - Barriers to energy efficiency, renewable energy and distributed resources still exist (e.g. throughput and split incentives)
- Re-connect trade offs and other values dis-integrated by restructuring and capture newly visible values
- Consumer impacts should be measured on a “whole consumer” basis
  - Not just as a function of utility prices
  - Customers can't afford the RIM test – bills matter more



# Looking to the Future: The Challenge for Regulators

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- Time has come to recognize externalities
- Pay attention and be involved to solve carbon issues at lowest cost
- Those with expertise and standing (this means *you*) should be the policy leaders on these issues
- On Issues of the Public Interest: Think big!



# Additional Resources

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- ***Who Should Deliver Ratepayer Funded Energy Efficiency?***, Harrington and Murray <http://www.raonline.org/Feature.asp?select=2>
- ***Dirty Air, Dirty Power***, The Clean Air Task Force, June 2002  
[http://www.catf.us/publications/reports/Dirty\\_Air\\_Dirty\\_Power.pdf](http://www.catf.us/publications/reports/Dirty_Air_Dirty_Power.pdf)
- **City of Austin: Carbon Dioxide Reduction Strategy**  
<http://www.ci.austin.tx.us/sustainable/finalfeb.pdf>
- **Maine: “A Climate Action Plan for Maine,”**  
<http://www.maine.gov/spo/pubs/origpdf/pdf/ClimateReport.pdf>
- **Massachusetts: “2002 Energy Efficiency Activities”:**  
[http://www.mass.gov/doer/pub\\_info/ee02-long.pdf](http://www.mass.gov/doer/pub_info/ee02-long.pdf)
- **Colorado: Excel Demand Side Management Settlement**  
[http://www.swenergy.org/news/XCEL\\_Energy\\_Settlement\\_DSM\\_Language.pdf](http://www.swenergy.org/news/XCEL_Energy_Settlement_DSM_Language.pdf)
- **SWEEP Website:** <http://www.swenergy.org>
- **Website:** <http://www.raonline.org>