

# DYNEGY

CHALLENGE

INNOVATION

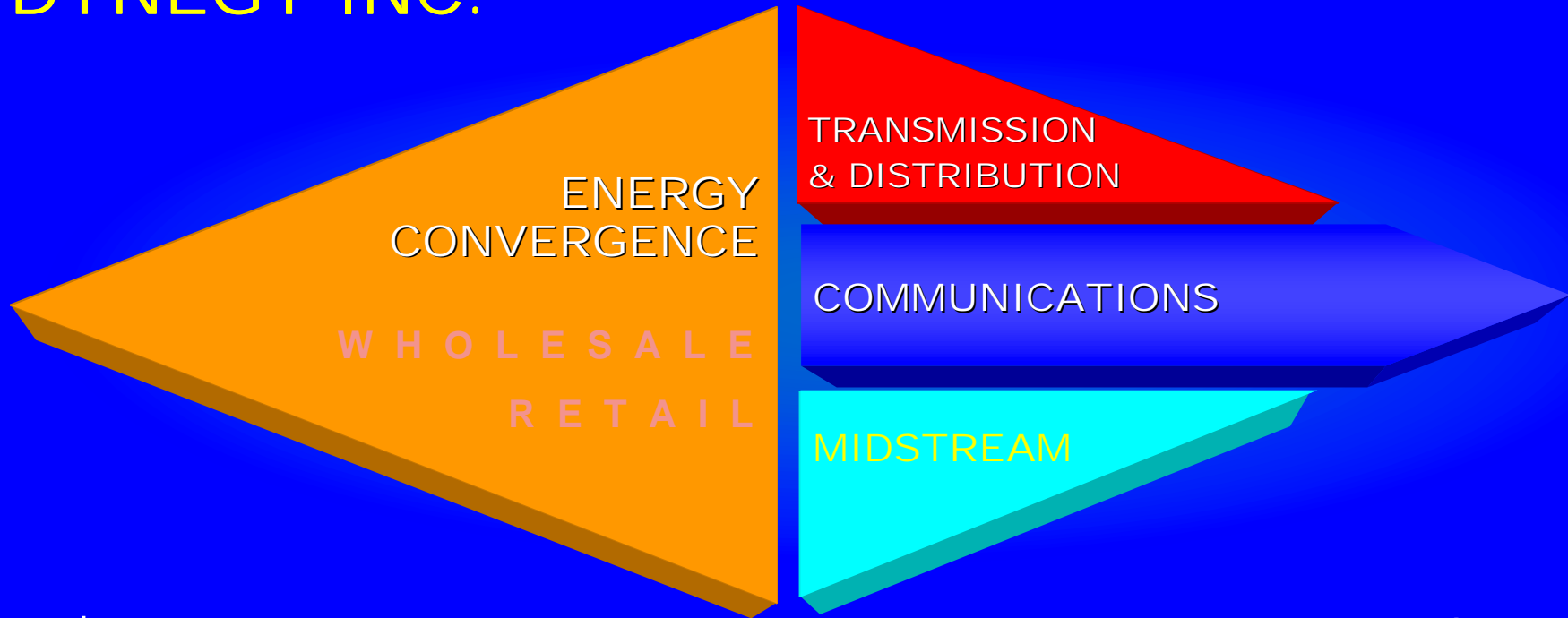
PERFORMANCE

*ELECTRICITY RESTRUCTURING:  
WHAT WENT WRONG/WHAT WORKED RIGHT?*

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# DYNEGY INC.

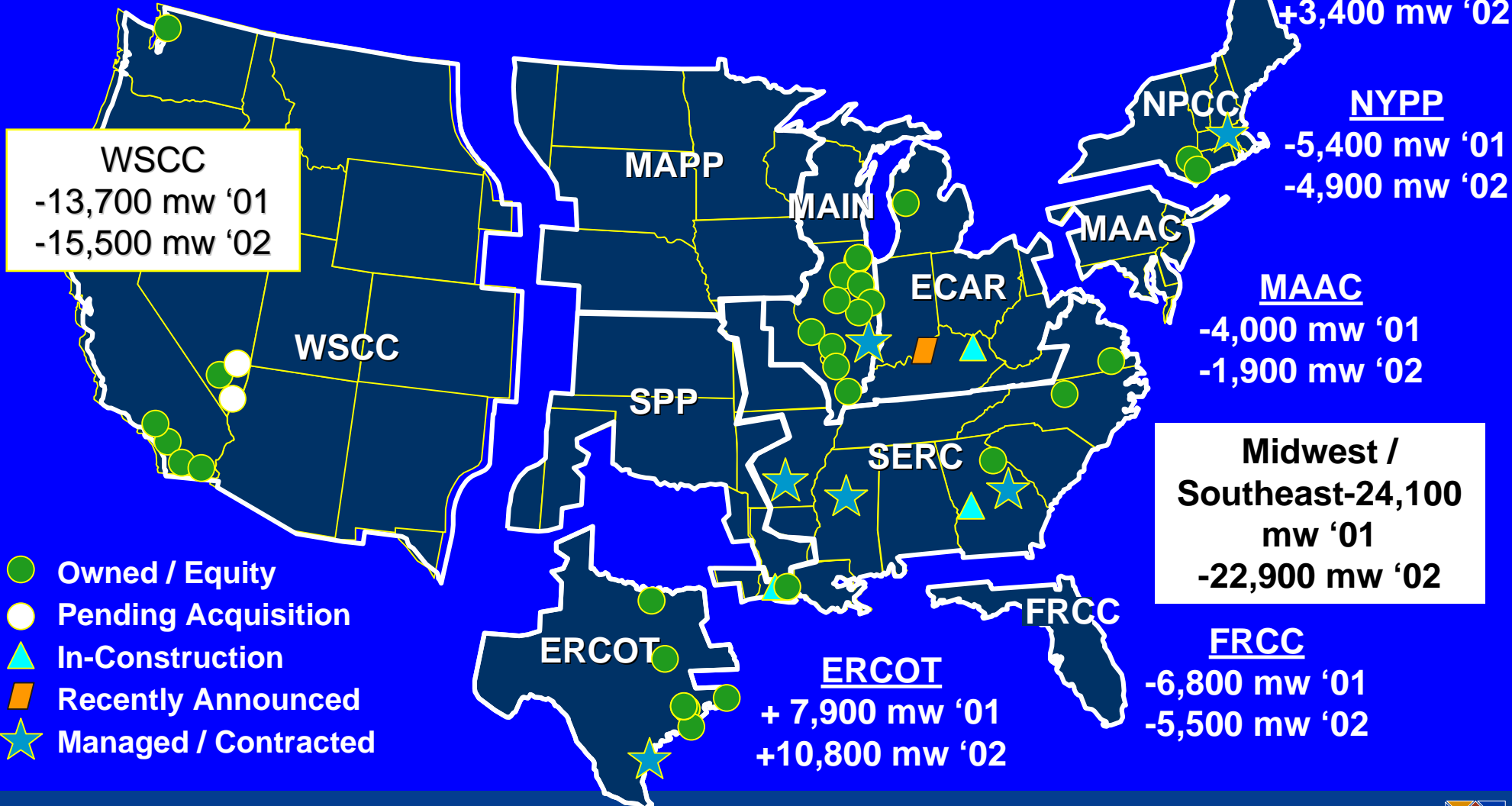


- ◆ **\$29 Billion Revenues \***
- ◆ **\$21 Billion Assets \***
- ◆ **\$16 Billion Equity Market Value**
- ◆ **5,900+ Employees**
- ◆ **19,100 MW Generation Control**
- ◆ **11 Bcf/d Natural Gas Sales \***
- ◆ **138 MM MWh Produced & Sold \***
- ◆ **565 MBbls/d Liquids Sales \***

\* Year End 2000

**TOTAL U.S.**  
 -44,500 mw '01  
 -36,500 mw '02

**"OPPORTUNITY" IN SHORT MARKETS\***



- Owned / Equity
- Pending Acquisition
- ▲ In-Construction
- Recently Announced
- ★ Managed / Contracted

\* Projected capacity deficits based upon NERC data and Dynegy estimates

# California Basics: What Did Happen?

- ◆ **Supply/Demand imbalance**
- ◆ **Market structure flaws**
  - Resort to spot/real-time markets for entire load
  - Price caps and other machinations
- ◆ **Little new supply**
- ◆ **Growth and drought in West**



# California Growth Statistics 1990-99

## ◆ Economic and Demographic

- Employment: +12%
- Population: +16%
- State Economy: +45%
- Electronics and Instruments Industry: +62%
- Communications Industry: + 80%

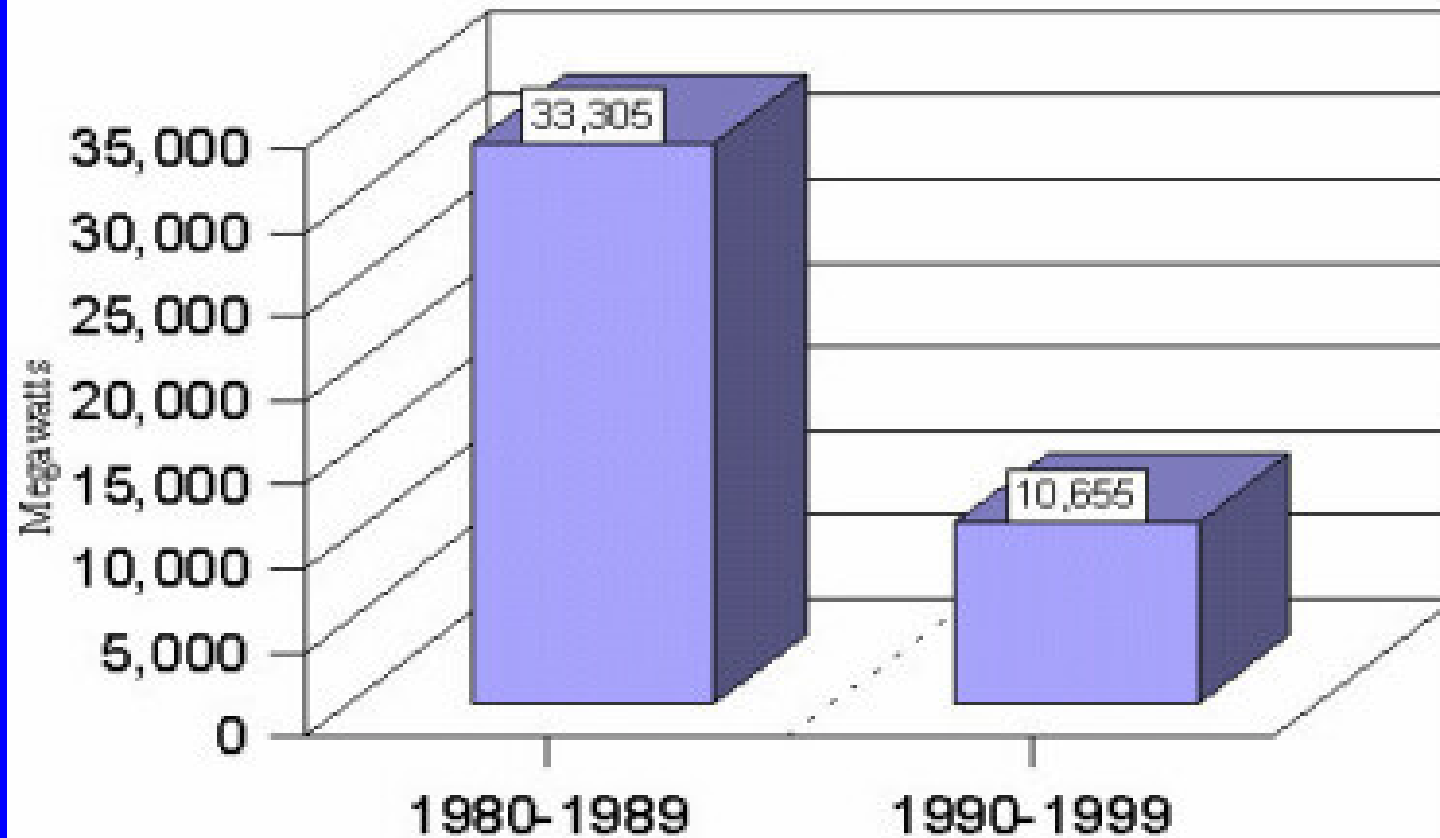
## ◆ Energy

- Nat. Gas Use +6%
- Electricity Use +9%
- Peak Demand +15%
- Peak Demand in Silicon Valley +33%
- **Power Generation Capacity +2%**

- ◆ Economic data from 1990-1998 actual, with 1998-1999 extrapolated using 1997-1998 growth rate (Source: CA Department of Finance, Economic Research Unit)
- ◆ Electricity use from 1990-1999 (Source: CEC)
- ◆ Peak Demand from 1990-1999 (Source: CEC)
- ◆ Gas use from 1990-1997 actual (Source: EIA); 19; Silicon Valley Growth from Los Angeles Times, 1/8/00.97-1999 assumes average growth rate from 1990-1998
- ◆ Generation Capacity growth from 1990-2000 (Source: 1990: CEC Electricity Report and appendices; 2000: CEC Power database)



## Generation Additions in the Western Interconnection 1980-1999



# LESSONS LEARNED - Dynegy's Perspective

- ◆ **Do not confuse bad results with bad acts**
  - prices increase when demand increases and supply does not
  - prices increase when production costs increase
  - since electricity cannot be stored, supply and demand must be balanced in real-time
  - electricity is produced in many different ways; the cost structure for electric production varies considerably



# LESSONS LEARNED - Dynegy's Perspective

- ◆ **Markets work best with many buyers and many sellers**
  - California demand is dominated by a few very large players (whose decisions were affected by the goal of stranded cost recovery)
  - the difficulty in developing and siting new projects in California constrained the supply side of the market
  - the centralized nature of the California market did not encourage innovation





# What to Do?

## ◆ Short-term -

- Get as much energy out of the real-time market as possible
- Increase supply however possible
- Decrease demand
  - ◆ Raise consumer prices (9% demand reduction when SDG&E raised prices = 4,000+ MW statewide)
- Revert to 2000 Emissions Limits
- Fix financial uncertainty problem
- Develop a viable means of returning utilities to solvency
- Moderate political rhetoric



# What to Do?

## ◆ Long-term

- Encourage new supply
- Infrastructure improvements
  - ◆ Gas delivery in California
  - ◆ Transmission – Path 15
  - ◆ Generation siting
- Restore credit and credibility to markets
- Demand response
- Wholesale market improvements
  - ◆ Regional RTOs
- Regulatory certainty



# KEY ISSUES IN RTO DEVELOPMENT

- ◆ **Eliminate Vertical Market Power**
- ◆ **Ensure Comparability**
- ◆ **Provide fair & open Interconnection Procedures**
- ◆ **Market-driven Congestion Pricing**
- ◆ **Mitigate Seams Issues**



# Vertical Market Power

## ◆ Why RTOs:

### – FERC concluded that:

- ◆ “opportunities for undue discrimination continue to exist that may not be remedied by functional unbundling”
- ◆ RTOs will remedy this impediment to competitive markets.

## ◆ Manifestations

- Lack of access to transmission, curtailments, TLRs
- Discriminatory interconnection procedures
- Lack of trust that transmission customers are being treated fairly



# Comparability

- ◆ Follow the Order No. 636 gas model
- ◆ RTOs alone do not “put all uses on the tariff”
- ◆ FERC Staff Report: *In order to improve the incentives for open access transmission, Commission should require native load to be served under the same tariff provisions as all other transmission services*



# Interconnection Issues

- ◆ **Multiple benefits of merchant generation**
  - enhances competition
  - promotes diversity in products and services
  - mitigates market power of incumbent utilities
  - contributes to overall market liquidity
- ◆ **RTOs should be the doorkeeper of fair, open and consistent interconnection procedures**



# Congestion Pricing Principles

- ◆ **CM proposals should be designed to satisfy the needs of the market, not be the “market”**
- ◆ **CM proposal should be judged whether they satisfy the needs of customers, including:**
  - **liquidity**
  - **certainty of price**
  - **certainty of delivery**
  - **transmission flexibility**



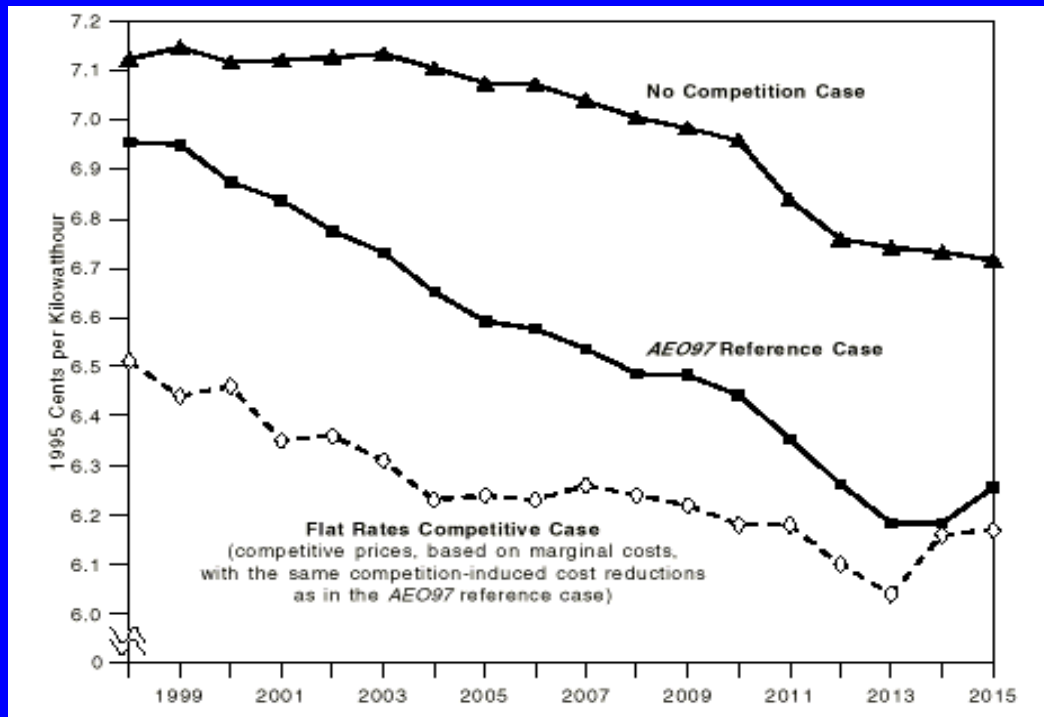
# Function 8 - Interregional Coordination

- ◆ Heightened recognition of regional markets
- ◆ Multiple uncoordinated efforts to solve seams issues
- ◆ Need for FERC to take a very active role in accomplishing Function 8
- ◆ Investments are being made; stranded costs are accumulating





# The Premise: Efficiency Gains from Competition Reduce Retail Prices



*U.S. Energy Information Administration projections (a penny is \$34 billion per year):*

*Higher price is no competition.*

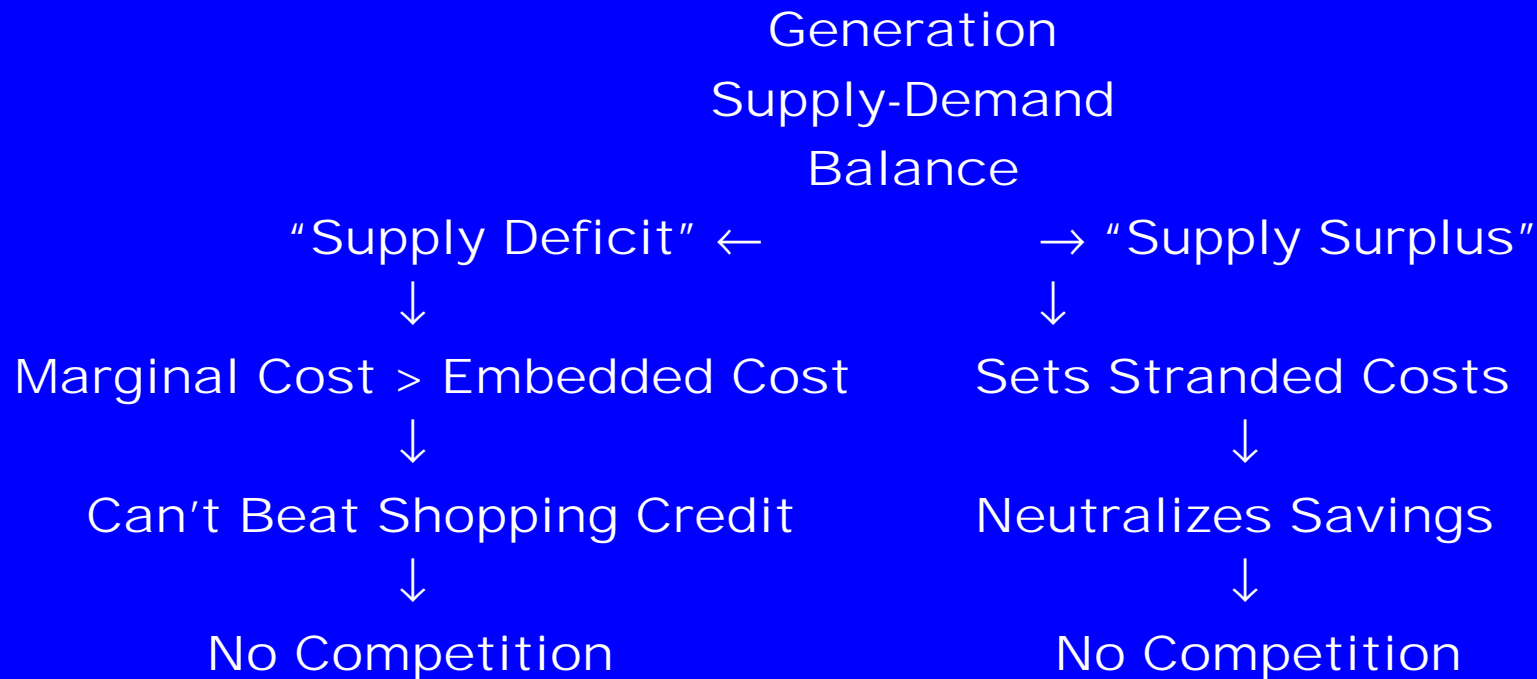
*Middle price is competition with stranded costs allowed.*

*Lower price is competition with no stranded costs.*

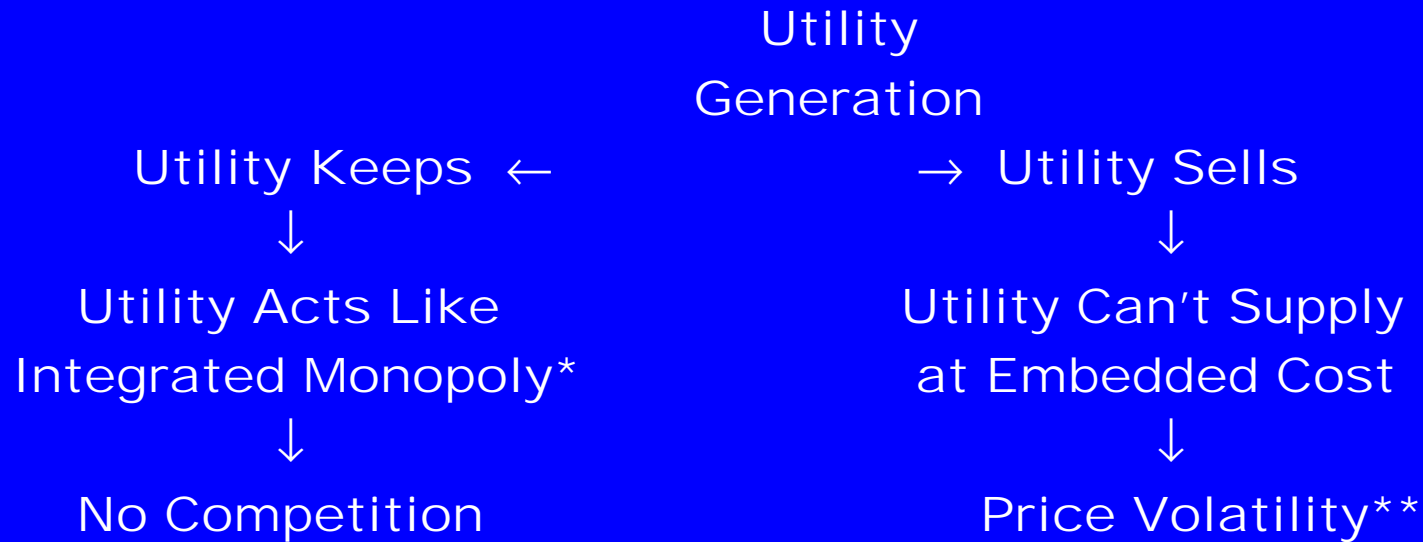
*Significant Long-Term Benefits.*



# Retail Market Conundrum # 1



# Retail Market Conundrum # 2



\* At least until wholesale price exceeds shopping credit.

\*\* At least at wholesale level (load serving entity can hedge).



# What's Right

- ◆ **Regional Markets are developing**
- ◆ **New Supply is being added**
- ◆ **Price signals are being sent**
- ◆ **Promising innovations in the field of renewables, distributed generation etc.**
- ◆ **Increase in the number and sophistication of market players**
- ◆ **Need to remember - Restructuring does not happen overnight**

