No Blue Pill:

Retail Restructuring is Failing but there's No Turning Back

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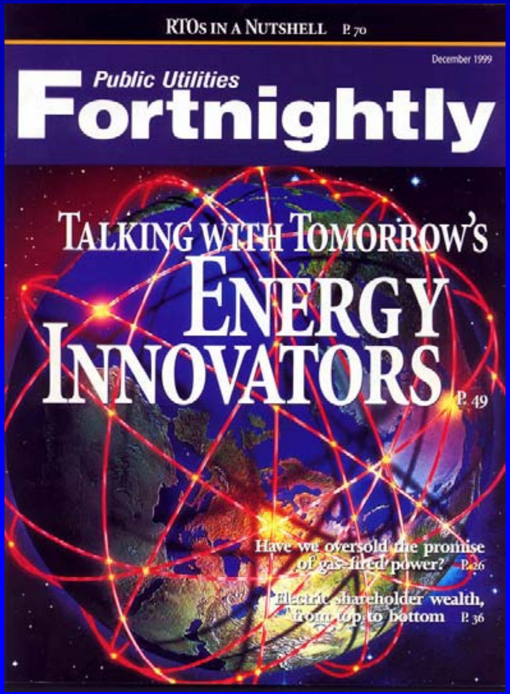
Center for the Advancement of Energy Markets

- ***CAEM***
  - Retail was failing
  - Something Missing
  - Think Tank on Energy Restructuring
- Character
  - Independent
  - Market-Oriented
  - Non-Profit-501(c)(3)
  - Change Agency, Think Tank
  - Not a lobbying group, trade association, or consulting firm
- Mission
  - Education
  - Vision
  - Advocacy



Energy Industry Restructuring

Traditional	*Emerging*
Command-and-Control	Market Based
Monopoly Utilities	Customer Choice
Bundled Services	Unbundling/Access
Cost-Plus Pricing	Performance Based
Silo-Based Products	Convergence
Fragmented	Consolidated
Parochial	Regional/Global
State Focused	Federal Focused

Case Study-Federal Gas

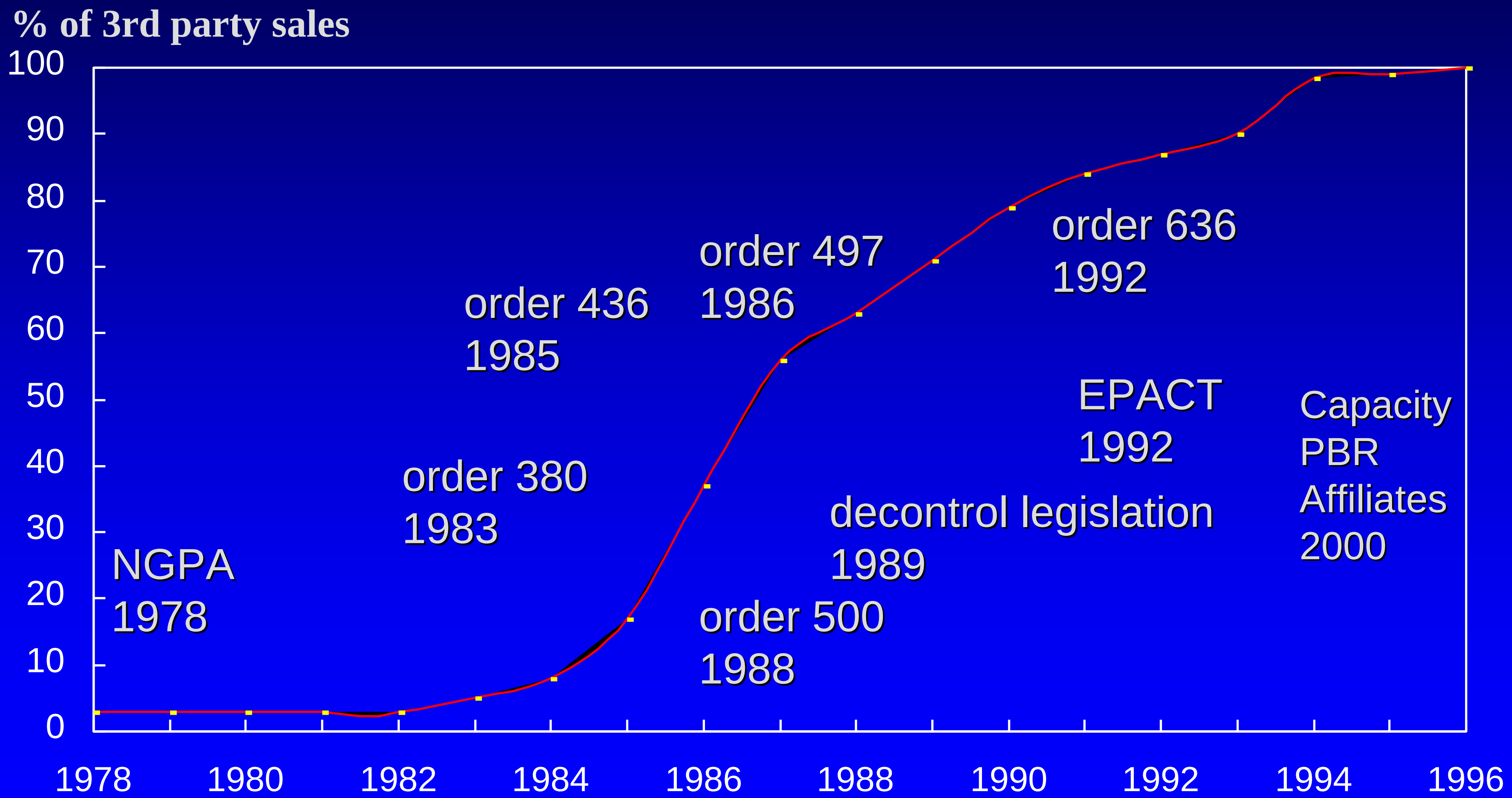
Phase I	Phase II	Phase III	Phase IV	Phase V

• Congressional Action (NGPA)	• Order 380
	• Open Access Blueprint (Order 436)
		• Implementation and Refinement of Open Access
		  • Order 451
		  • Order 497
		  • Order 500
			• Ancillary Issues
			  • Wellhead Decontrol
			  • Order 636
			    • Rate Design
			    • Merchant Deregulation
			    • Secondary Market
			    • Transition Costs
				INCOMPLETE 2000
				•Performance Based Regulation
				• Secondary Market for Capacity
				• Affiliate issues

1978	1985	Mid 1980s	1989/1992	2000

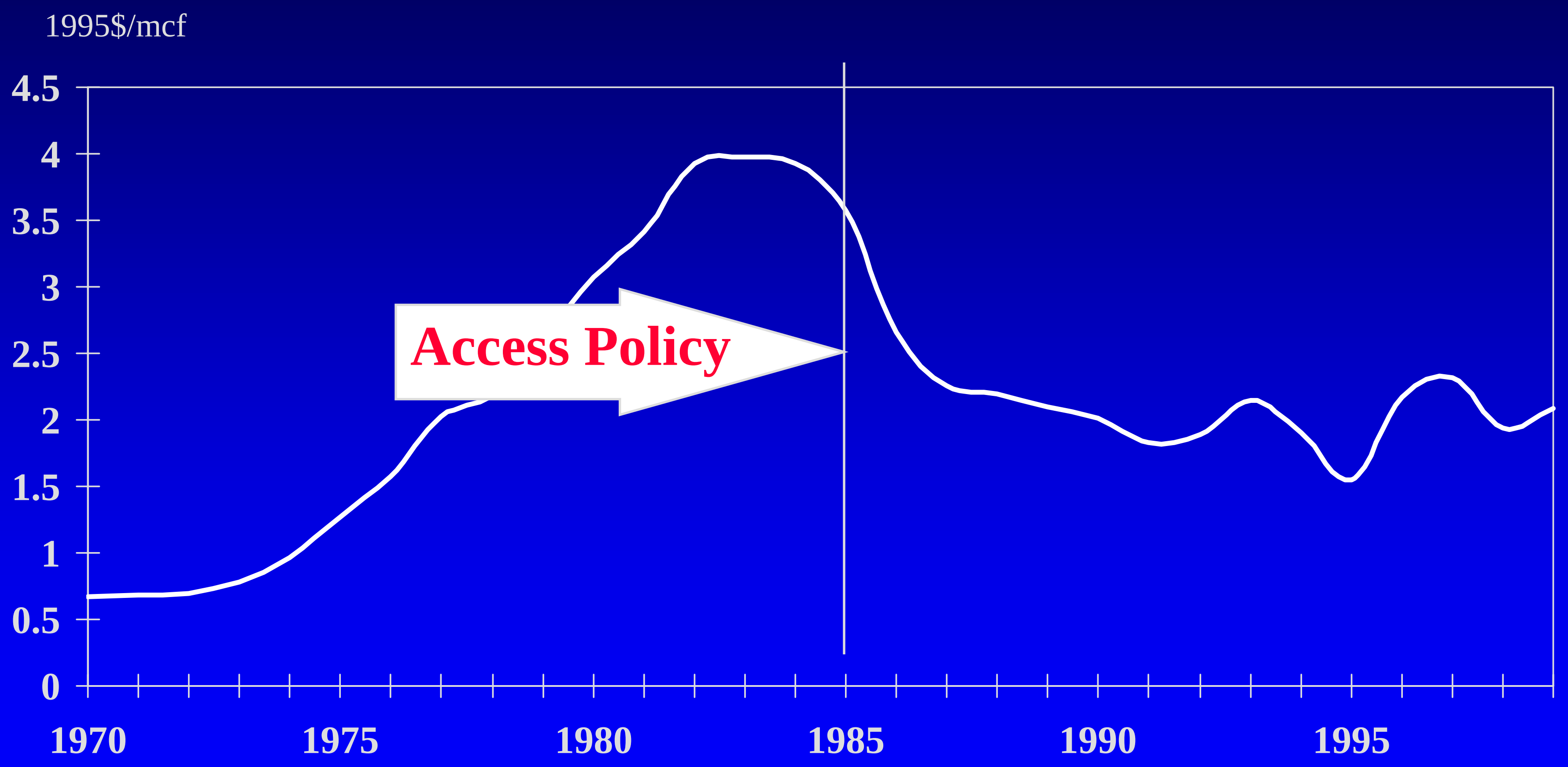
Illustration of Access Path:

Increase in 3rd Party Access on Natural Gas Pipelines



Natural Gas Wellhead Prices

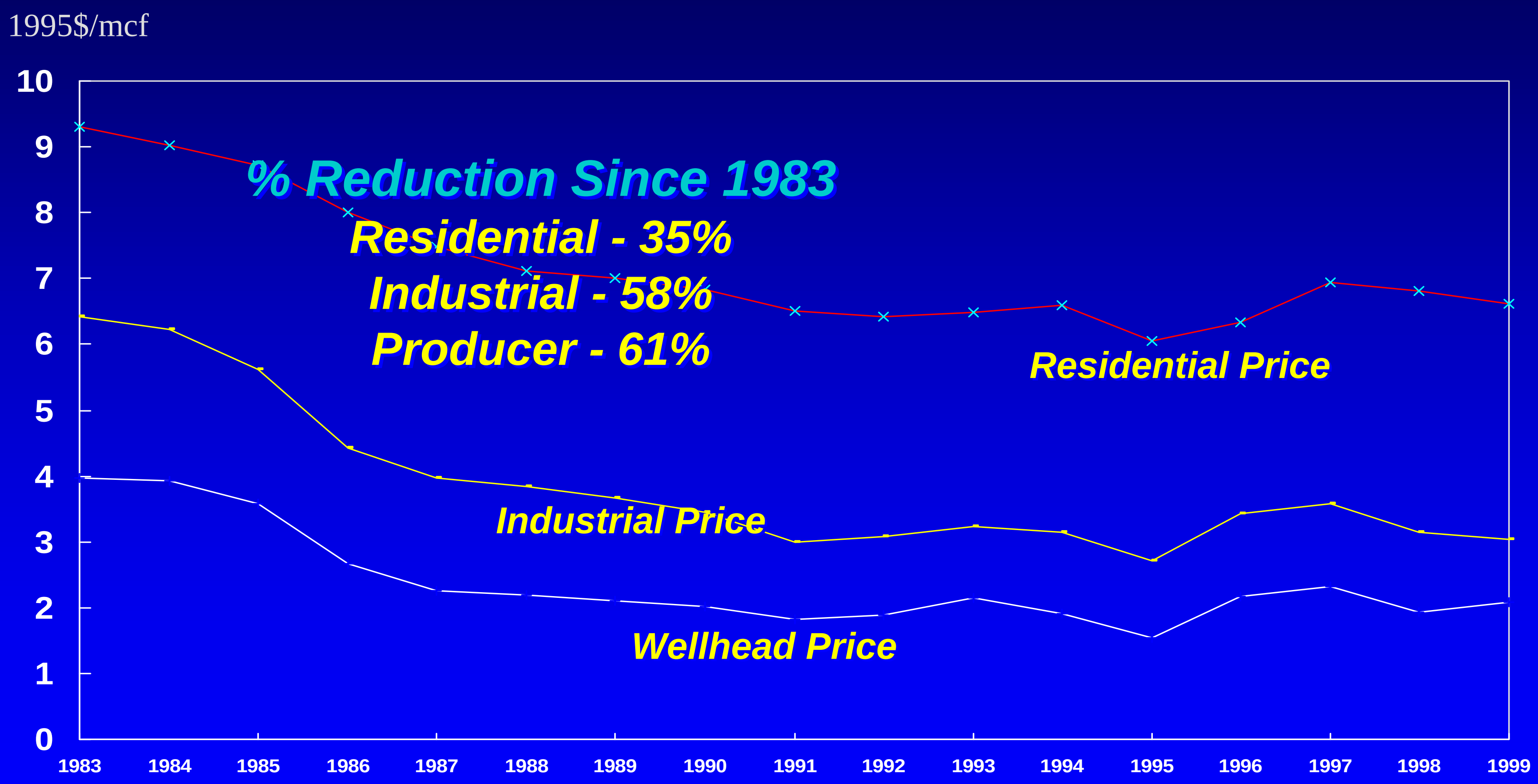
Competition has led to lower wellhead



Source: Energy Information Administration

Natural Gas Prices

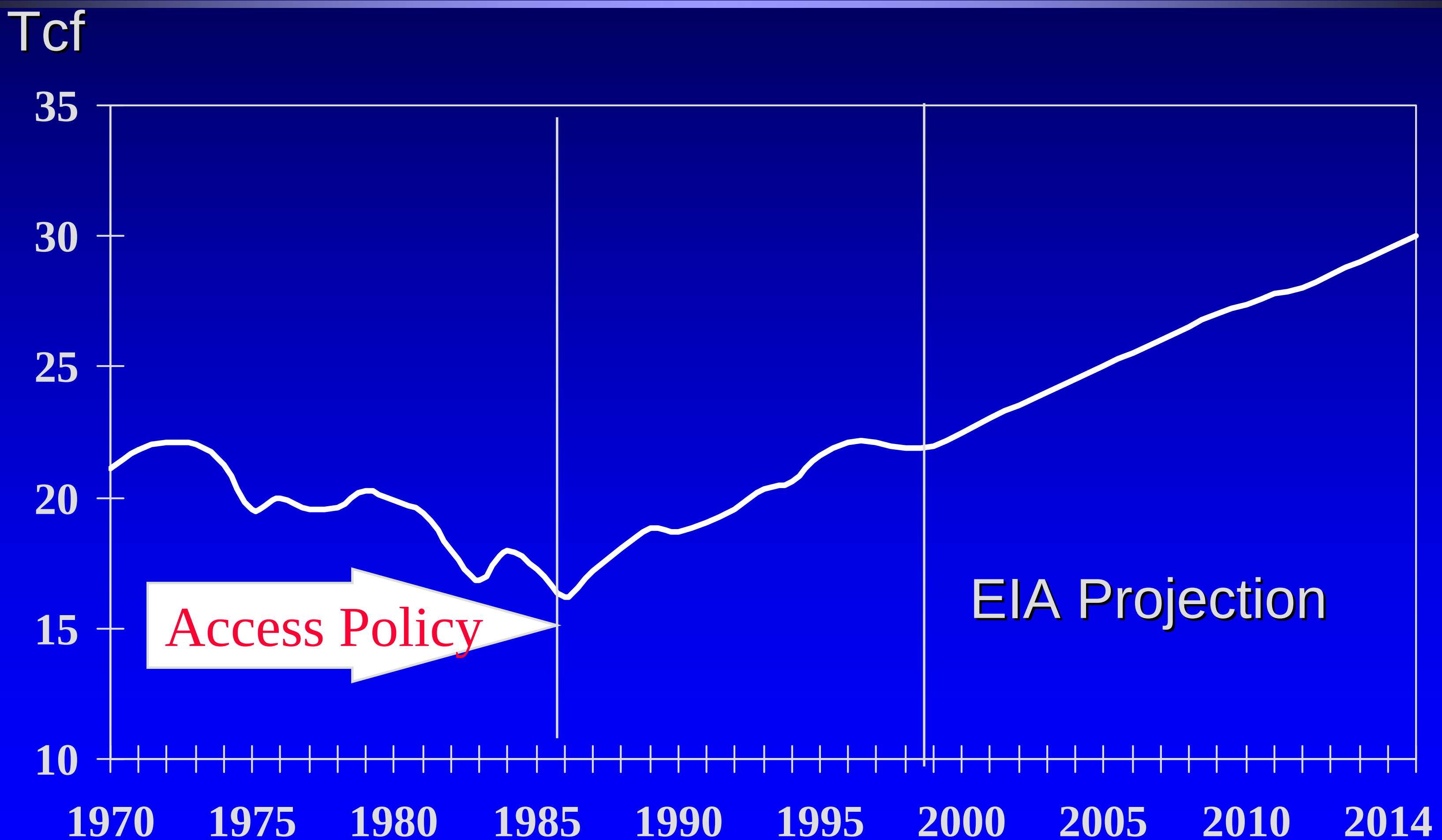
Gas Competition Benefited Residentials



Source: Energy Information Administration

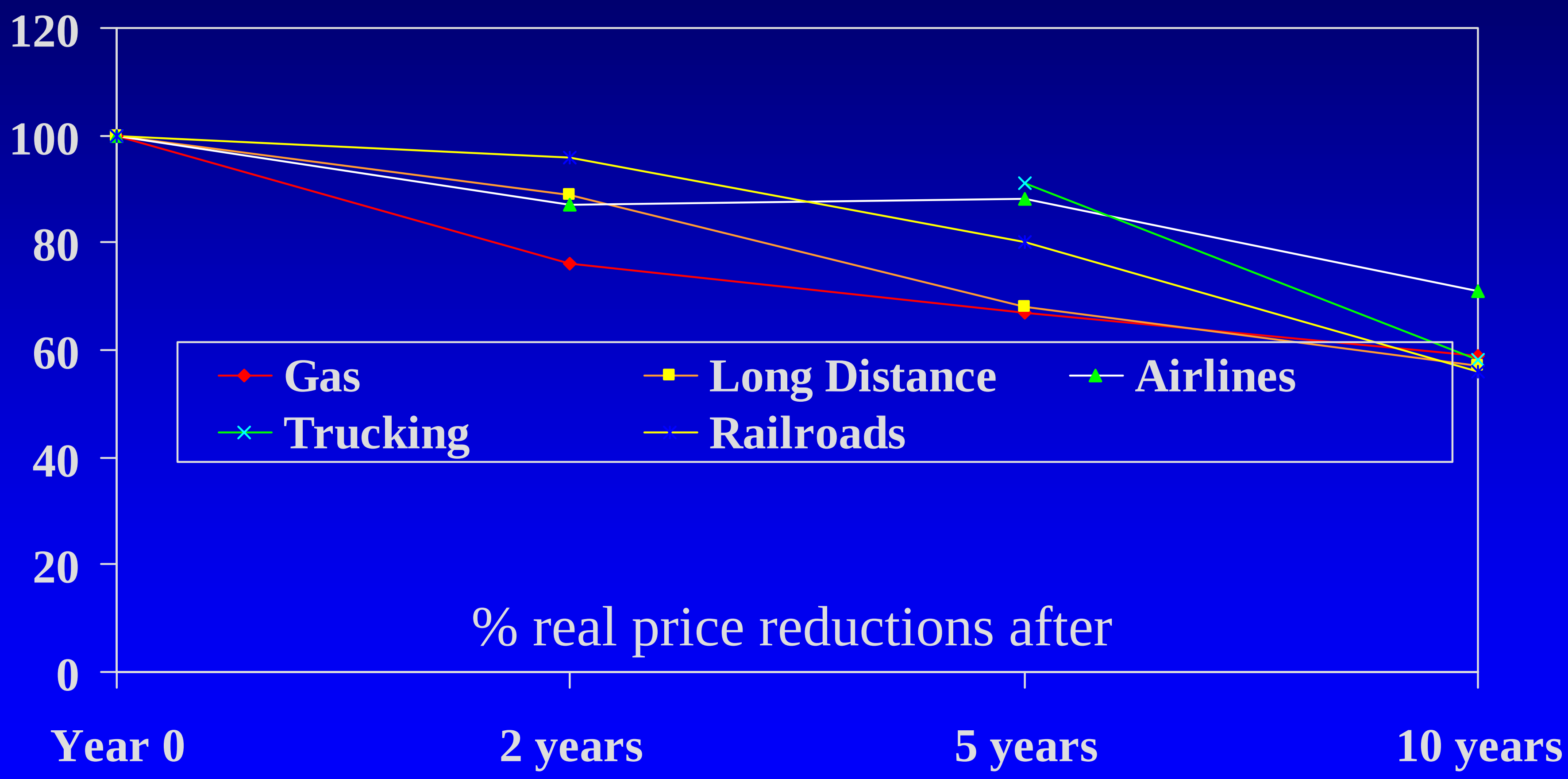
Natural Gas Consumption

Increases 25% since access policy



Source: Energy Information Administration

Industry Deregulation and Price



Source: Crandall and Ellig (1997)

Retail ACCESS Revolution will be more complex

Federal	*State*
Single Customer	Multiple Customer
Less Political	More Political
One Energy Form	Two Energy Forms
Limited Issues	More Issues
FERC	50+ States
About 25 companies	300 to 4000 Companies
FERC Funded	States Underfunded
No Coordination	Coordination Needed
Decade of Transition	Transition Delayed

RED Index

- Indices
  - DOW over 11,000
  - CPI at 3.5%
  - Hurricane Mitch was a Category 5 on Saffir-Simpson Hurricane Intensity Scale.
- RED=Retail Energy Deregulation
  - 18 Key Issues that Determine the Quality of Access
  - Scale from 0 to 100
  - Survey of State Commissions
  - Presented before NARUC Annual Meeting in March
  - Updated 3x a year
- Comprehensive New Methodology in October
  - Coverage extended to Gas and Canada
  - Delphi Group at Workshop at NARUC Summer Meetings

Key Attributes

1: Deregulation Plan
2: Percent of Eligible Customers
3: Percent Switching
4: Divestiture of Generation/Capacity
5: Default Provider
6: Default Provider Price Risk
7: Default Provider Rates
8: Competitive Standards
9: Uniform Business Rules

Key Attributes

10: Stranded Cost Calculation
11: Stranded Cost Implementation
12: Billing
13: Metering
14: Wholesale Market Model
15: Distributed Resources Interconnection
16: Regulatory Convergence
17: PBR for Network Facilities
18: Commission Reengineering

Pennsylvania

Pennsylvania	February 2000 Characterization	February 2000 Score	*July 2000 Characterization*	*July 2000 Score*
Attribute 1: Deregulation Plan	Detail	10		
Attribute 2: Percent of Eligible Customers	66%	3.5	***100.0%***	***5***
Attribute 3: Percent Switching	26%	5	***20.0%***	***2***
Attribute 4: Divestiture of Generation	Voluntary	3	***Incentive***	***7***
Attribute 5: Default Provider	Non-utility	4	***Any Company***	***5.6***
Attribute 6: Default Provider Price Risk	No	8		
Attribute 7: Default Provider Rates	Retail	3.5		
Attribute 8: Competitive Standards	Func Sep	3		
Attribute 9: Uniform Business Rules	Uniform	2.5		
Attribute 10: Stranded Cost Calculation	Admin	1.5		
Attribute 11: Stranded Cost Implementation	Fixed	3		
Attribute 12: Billing	ESP	3		
Attribute 13: Metering	Yes	3		
Attribute 14: Wholesale Market Model	Both	2.5		
Attribute 15: Distributed Resources Interconnection	Some	1.5		
Attribute 16: Regulatory Convergence	Some	1.5		
Attribute 17: PBR for Network Facilities	No	0		
Attribute 18: Commission Reengineering	No	0	***Some***	***1.5***
Total Points		58.5		***65.1***
State Ranking out of 51	January	1	***July***	***1***

Pennsylvania: Ranked #1

Rank		State	Total Score	
1	(1)	Pennsylvania	**65**	(58)
2	(2)	New York	**64**	(54)
3	(3)	Maine	**61**	(50)
4	(7)	Massachusetts	**54**	(42)
5	(5)	Texas	**53**	(44)
6	(4)	Nevada	**52**	(49)
7	(6)	Maryland	**52**	(44)
8	(17)	Rhode Island	**48**	(26)
9	(8)	New Jersey	**46**	(36)
10	(9)	Connecticut	**43**	(34)

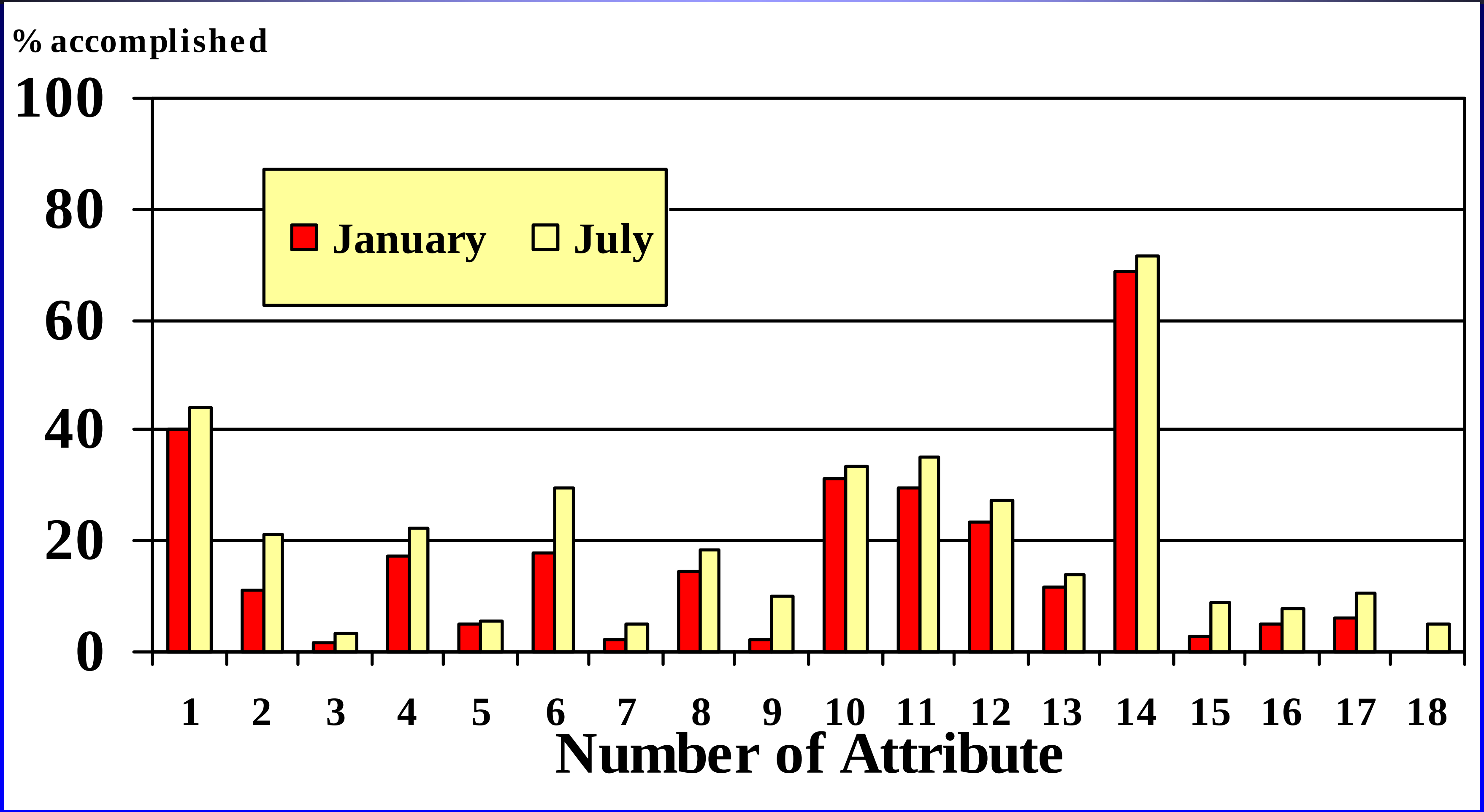
Major Developments

- 47 states participated; up from 22
- 4 States improved by 20 or more points

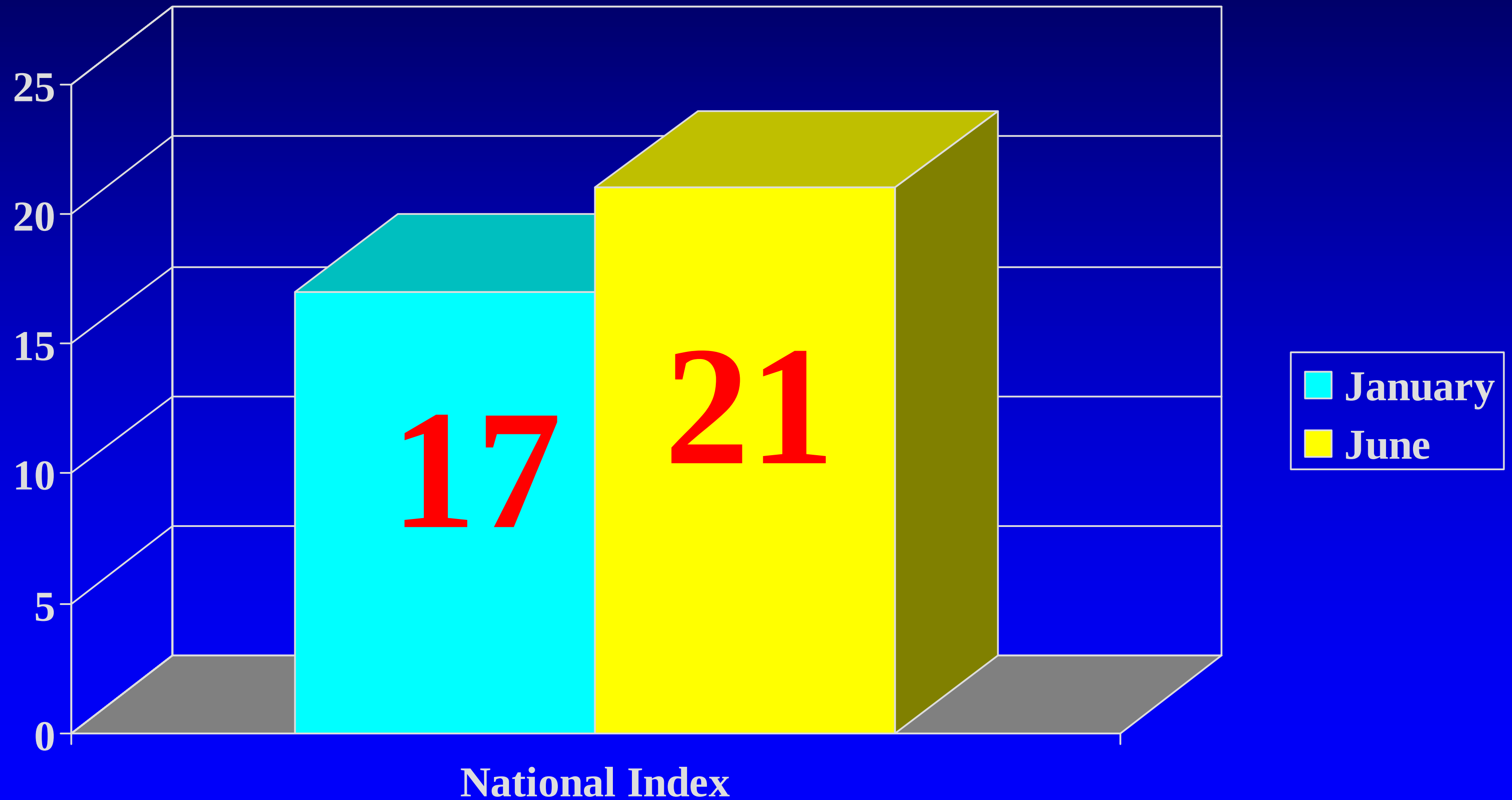
State	*February RED Index Score*	*July RED Index Score*	*Increase*	*July Rank*
Michigan	6	39.5	***34.5***	12
West Virginia	5	30.5	***25.5***	19
Ohio	11.5	35.5	***24***	15
Rhode Island	25.5	48.5	***23***	8

- 35 states had no change or less than 5 point gain
- California is now a market and policy disaster

Progress on Accomplishing Attributes



National Red Index Score



Success of RED Index

- NY PSC Press Release
- Vermont DPS use as strawman
- Alabama Attorney General
- Pennsylvania cited it for reengineering
- World Bank called it "the most sophisticated scorecard for measuring power sector reform."
- Provided free to 600 public sector organizations
- Companies purchasing subscriptions:
  - Duke, PSE&G Energy Services, Enron, Allegheny Power, Price Waterhouse Coopers, DLJ, Constellation, Deutsche Banc, ConEd, NRECA, Excelergy, Green Mountain, FPL, GPU, Marubeni Power International, McKinsey, Niagara Mohawk, PECO, PG&E, Shell, SoCal Edison

Three Sets of Drivers

- Imposed Policy Drivers
- Technological Drivers
- Adaptive Market Drivers

Eight Imposed Policy Drivers

- Freedom of Choice
- Passive Access: Unbundling
- Active Access: Assignment
- Divestiture
- Pricing for Facilities
- Standardization
- Antitrust
- Federalization

Uniform Business Practices Not on Radar Screen 1 Year Ago

- Activity from Q3'99 to Q3'00
  - Coalition for Uniform Business Rules (September 1999 Report)
  - CUBR/EEI Phase I Meetings (Q 4 99)
  - NCLC Draft Report (January 2000)
  - NRECA (Q 1 00)
  - GISB Meeting at DOE (February 2000)
  - CUBR/EEI Interim Report (Q1 00)
  - CUBR/EEI Phase II Meetings (Q2 00)
  - CUBR/EEI Final Report (July 00)
  - NARUC Resolution, Project and Final Report (July 00)
  - North American Summit on Energy Restructuring
- An Historic Movement, But Chapter Not Yet Written

North American Summit on Energy Restructuring

- Announced at World Forum on Energy Regulation in Montreal
- Hosted by NARUC and USDOE
- CAEM responsible for program and speakers
- November 29 to December 1 in Dallas
- Focus on Harmonization and Coordination
- Border Conflicts Issues
- Accords Forum

Three Technology Drivers

- Energy Manufacturing
- Information
- End Use

Seven Adaptive Market Drivers

- Surplus/Scarcity
- Convergence
- Divergence
- Economic Rationalization--CHP
- Consolidation
- Globalization
- Cleaner Environment

We can predict benefits.

True or False?

Embrace Creative Destruction

- Schumpeter's Creative Destruction
  - "The opening up of new markets … incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. ***This process of Creative Destruction is the essential fact about capitalism."***
- ***Allocative Efficiency***
- ***Productive Efficiency***
- ***Major gains from Productive Efficiency***

Current restructuring is succeeding.

True or false

Adopt Active Access

- Active Access--rules mandate/encourage choice
  - Regulatory Convergence within state
  - Prognostic Consumer Education
  - Uniform Standards and Policy Models
  - Georgia process for assigning passive customers
  - NY and MA require elimination of merchant function
  - Divestiture of Generation
  - Telecom Model for Marketing Affiliate--14 point list
  - Shopping credit high enough to encourage choice
  - Facilitate Consolidation
  - Commission Reengineering for Restructured Markets
- Georgia Gas--Start date was November 1998
  - Residential Customer penetration was about 60% by June 1999. All customers now assigned.

There is less regulation after restructuring than before.

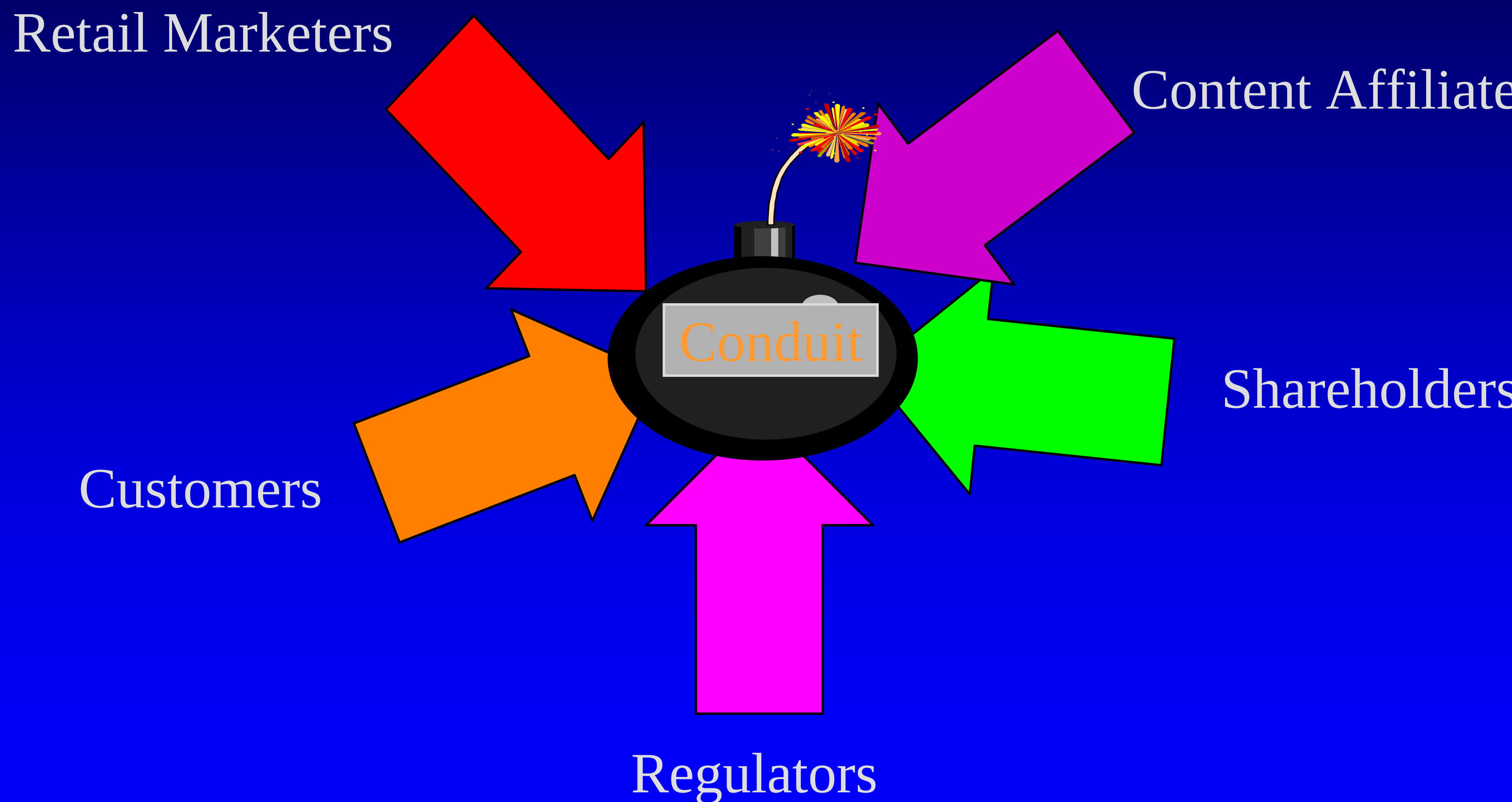
True or false

In the future, the network provider will not perform competitive services.

True or false

Content/Conduit Divergence

All Key Stakeholders Unhappy



In 2010 there will be 10 energy logistical companies.

True or false

By 2010, Amazon.Com will own the electric customer

True or false

Perspectives on Change

**Politics is the art of looking for trouble,
finding it everywhere,
diagnosing it incorrectly, and
applying the wrong remedies.**

Marx *(Groucho)*

Quote From Machiavelli's, *The Prince* (1513)

[T]here is nothing more difficult, more perilous to conduct, or more uncertain in its success, than to take the lead in a new order of things. [T]he innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new.

Acts 19: 23-28

About that time there arose a great disturbance about the Way (competition). A silversmith (utility manager) named Demetrius, who made silver shrines of Artemis (central station plant), brought in no little business for the craftsmen (lawyers). He called them together, along with the workmen in related trades, and said: "Men, you know we receive a good income from this business (monopoly). And you see and hear how this fellow Paul (Malloy) has convinced and led astray large numbers of people (regulators). He says that man-made gods (regulation) are no gods at all (markets work). There is a danger not only that our trade (utility management) will lose its good name (public utility) but also that the temple of the great goddess Artemis (reliability) will be discredited, and the goddess herself (regulated monopoly), who is worshipped throughout the province of Asia, and the world, will be robbed of her divine majesty."

When they heard this, they were furious…

New York Court of Appeals

In mythological times fire was the exclusive property of the gods. When Prometheus, a Titan, broke the monopoly of the gods and brought the gift of fire to mankind, so incensed were the gods that they caused Prometheus to be chained to a great rock where during the day an eagle devoured his liver. During the night his liver regenerated and the process continued until Prometheus was freed by Hercules.

If you resist change, you die. If you adapt to it, you survive. If you cause it, you lead.

Ray Noorda (CEO of Novell).

Change occurs when the pain of holding on is greater than the pain of letting go!

Never give in, never give in, never, never, never, never- in nothing great or small, large or petty-never give in except to convictions of honour and good sense.

Winston Churchill 1941

Pioneers get all the arrows, but they get the best campsites.

Caution Against Moderation

Closing Story

The Future:
Its always harder than you think its going to be!