

# Competition in Natural Gas

Georgia Natural Gas  
Competition and Deregulation Act  
1998 to 2015

Presented to the  
NARUC Committee on Gas  
November 9, 2015

# Overview



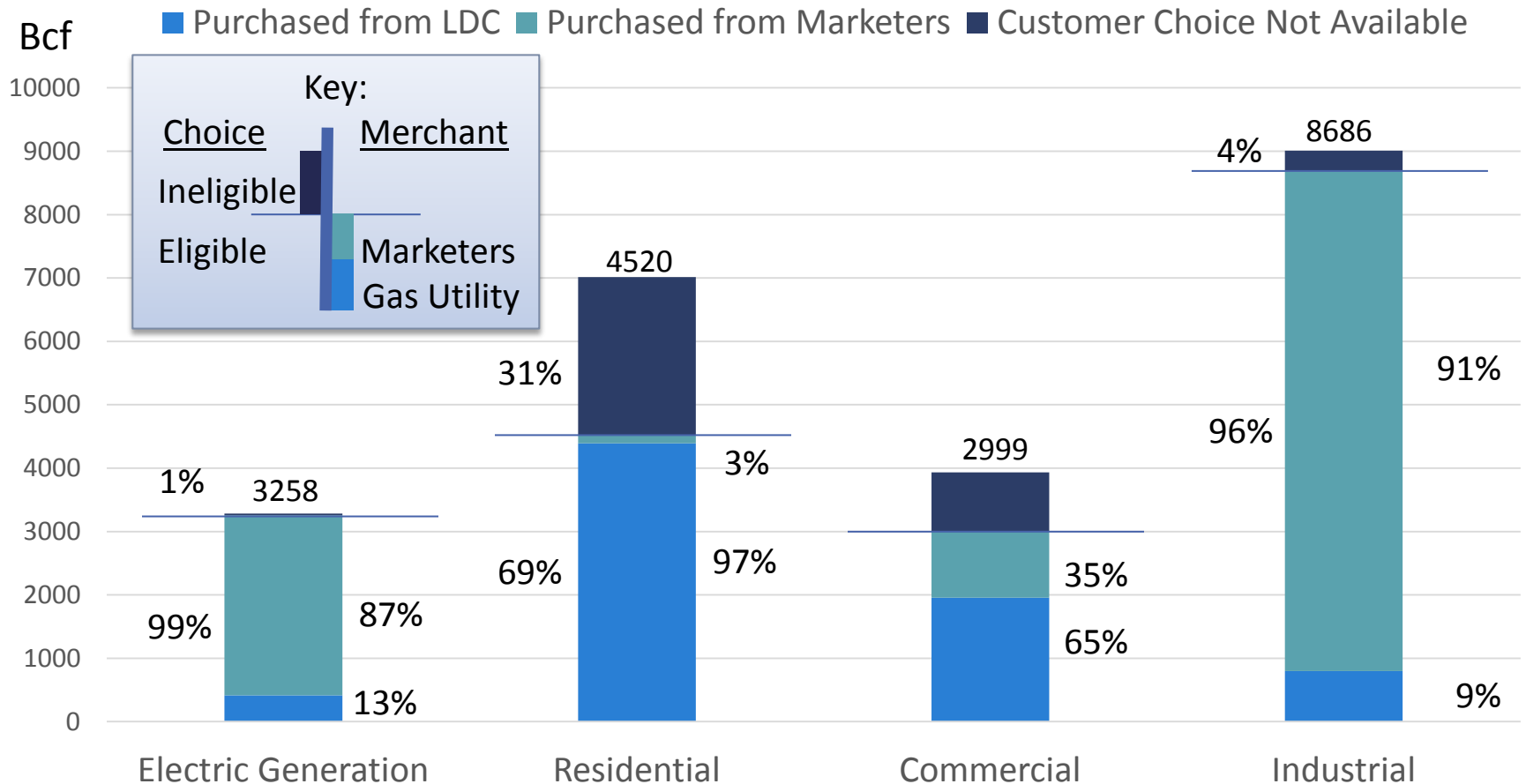
- What forces influenced the Georgia approach to customer choice?
- How did Georgia introduce competition into the residential market?
- What factors drove the market?
- How does Georgia compare with other jurisdictions?
- What have we learned that may have applications elsewhere?

# Status of Early Restructuring Programs in the U.S.

- In the years leading up to AGL's unbundling, there had been a steady increase in the number of gas and electric restructuring initiatives across the nation.
- Similar initiatives were undertaken in other nations as well.
- Although the initial efforts targeted industrial and large commercial programs, the trend shifted in the mid 1990s for restructuring programs to offer unbundled services to all customers.
- By 2000, virtually all U.S. jurisdictions had undertaken initiatives on utility restructuring, and 24 jurisdictions had undertaken initiatives on natural gas restructuring at the residential level.
- In 1998, the year in which AGL's program was underway, more than 80% of all natural gas sold in the U.S. *could be* sold through choice programs, and 61% of all natural gas was sold through choice programs.
- Nonetheless, virtually all of the "choice program" volumes were to non-residential customers.

# Status of Early Restructuring Programs in the U.S.

## Actual and Estimated Potential Customer Choice Natural Gas Volumes, 1998



# Status of Early Restructuring Programs in the U.S.

## Actual and Estimated Potential Customer Choice Natural Gas Volumes, 1998

End Use	Total Gas Use	Gas Utility Sales		Actual Customer Choice Volumes		Minimum Potential Customer Choice Available	
Electric Utility	3,258	415	13%	2,843	87%	3,231	99%
Industrial	8,686	797	9%	7,889	91%	8,364	96%
Commercial	2,999	1,958	65%	1,041	35%	2,064	69%
Residential	4,520	4,393	97%	127	3%	2,026	45%
<b>Totals</b>	<b>19,463</b>	<b>7,563</b>	<b>39%</b>	<b>11,900</b>	<b>61%</b>	<b>15,688</b>	<b>81%</b>

Source: American Gas Association, based on Energy Information Administration, U.S. Dept. of Energy, Form 176, 1998 data. Volumes are expressed in Bcf.

Customer Choice is defined as natural gas that is purchased from a source other than the local gas utility.

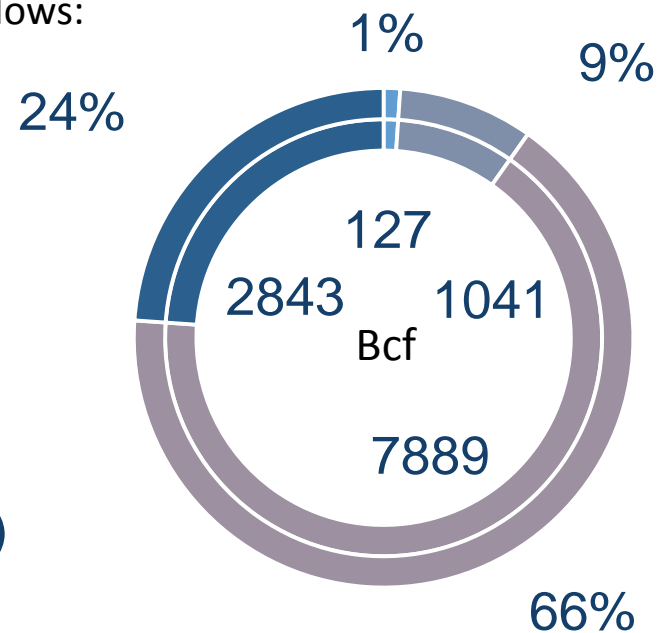
“Minimum Potential Customer Choice Volumes” are AGA estimates of the minimum volumes that customers could purchase from sources other than gas utilities.

# Status of Early Restructuring Programs in the U.S.

61% of all Gas Delivered in 1998 was sold by someone other than the local natural gas distribution company.

11,900 Bcf of the year's 19,463 Bcf were allocated as follows:

- Residential -- 127 Bcf (1%)
- Commercial -- 1,041 Bcf (9%)
- Industrial -- 7,889 Bcf (66%)
- Electric Generation -- 2,843 Bcf (24%)



But, virtually all (99%) of the “choice program” volumes were to non-residential customers.

# Status of Restructuring Programs in the U.S.

Mid to Late 1990s

As of the time AGL implemented customer choice:

States with the higher average gas bills tended to be more unbundled

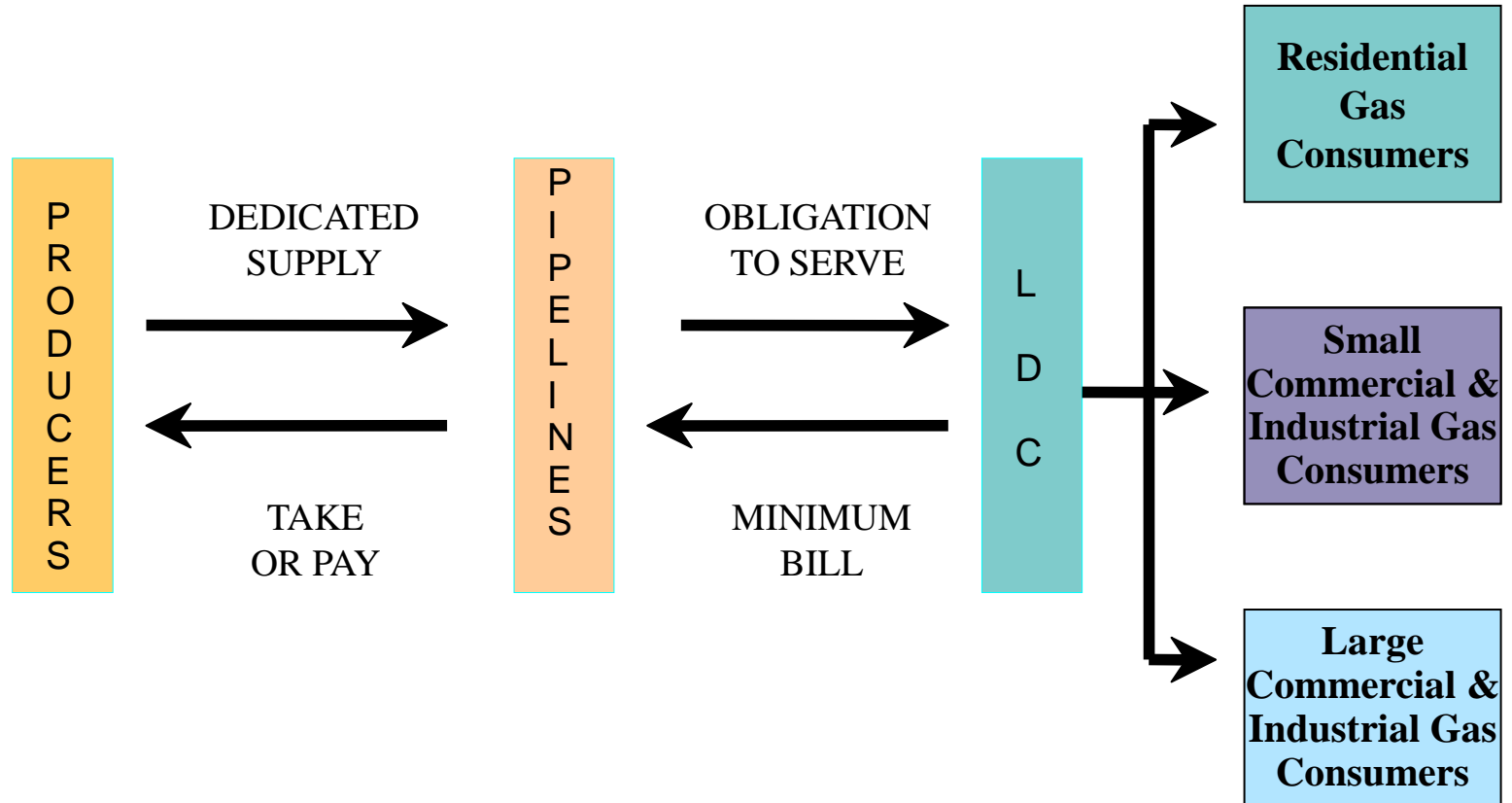
- 87% of “high” bill states were unbundled or had large pilot programs
- 31% of “low” bill states were unbundled or had large pilot programs
- Georgia was an exception - complete unbundling with relatively low consumer bills

Moreover, AGL Resources Inc. and its subsidiary, Atlanta Gas Light Company, were among the advocates for the Georgia Legislation

WHY?

# Federal Restructuring Worked

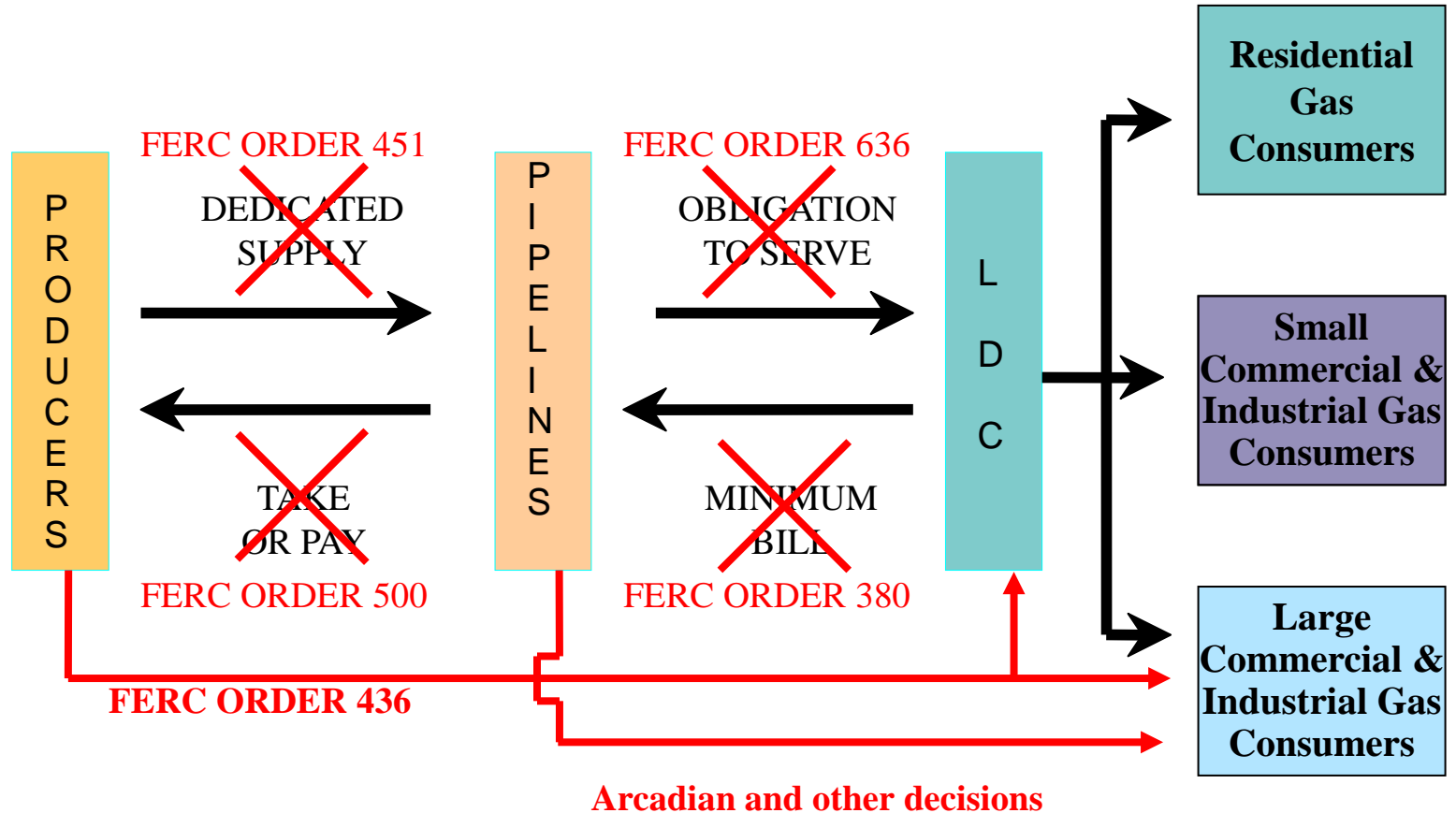
## Federal Regulatory Changes





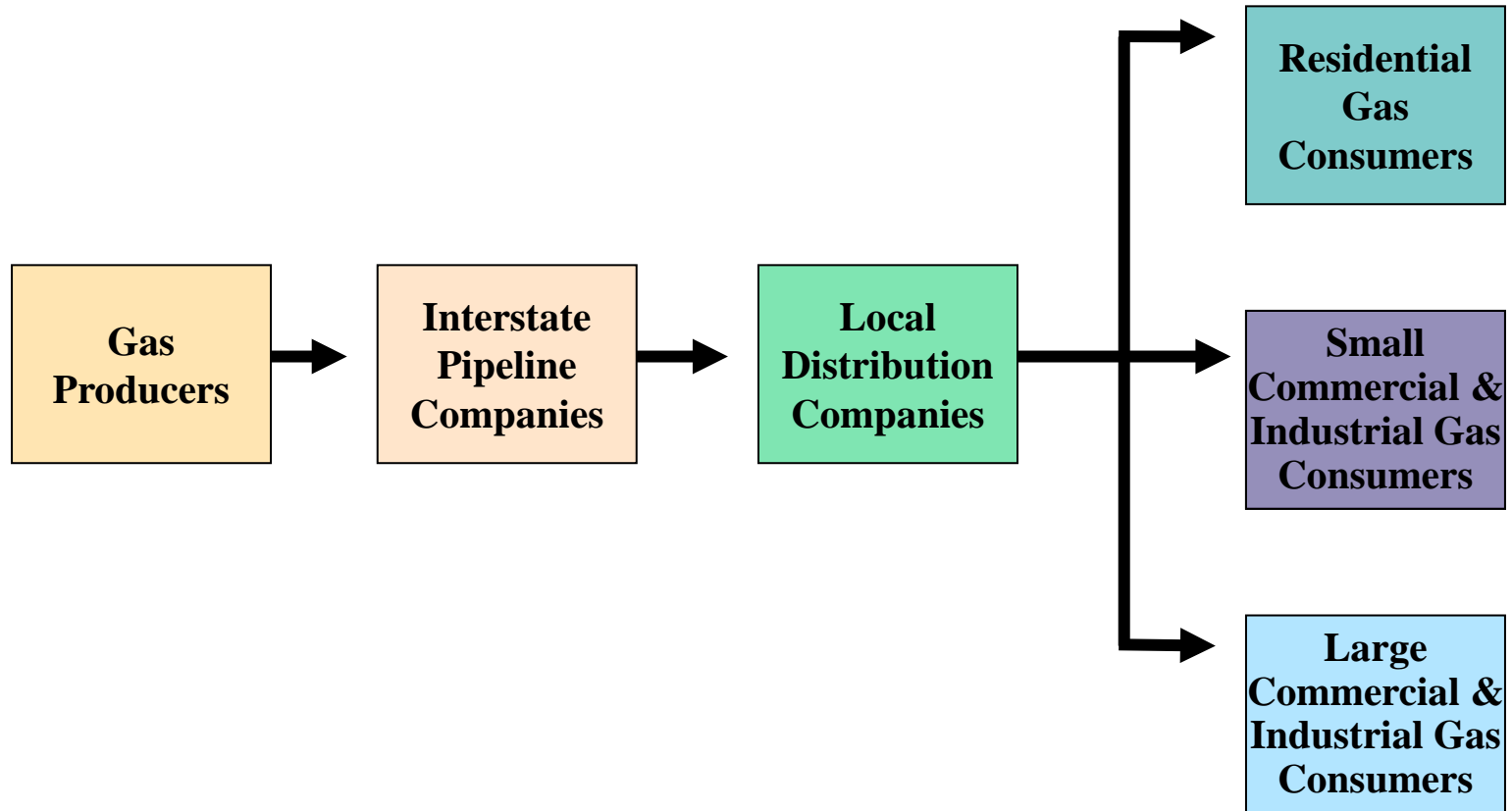
# Federal Restructuring Worked

## Federal Regulatory Changes



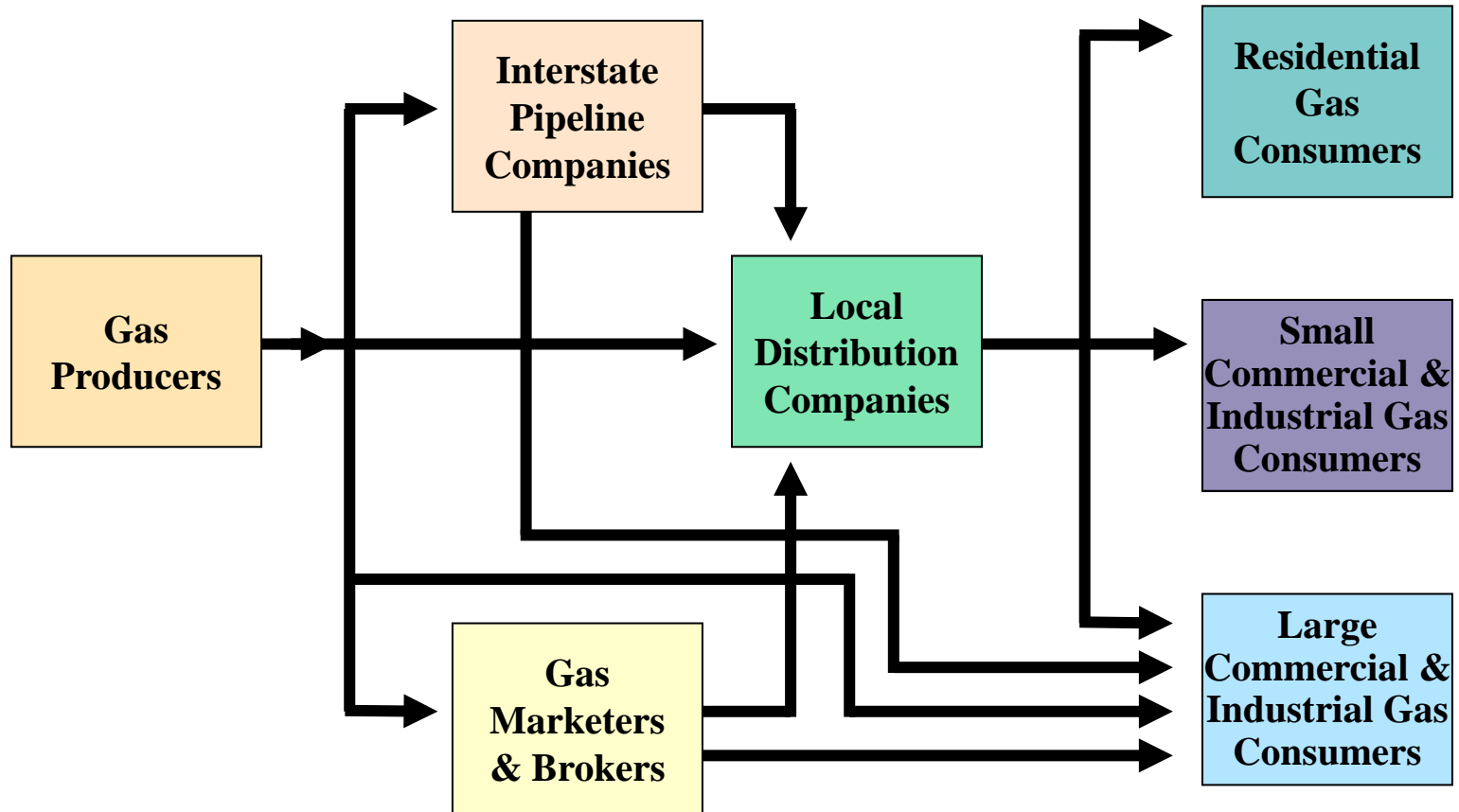
# Federal Restructuring Worked

## Historic Transaction Structure



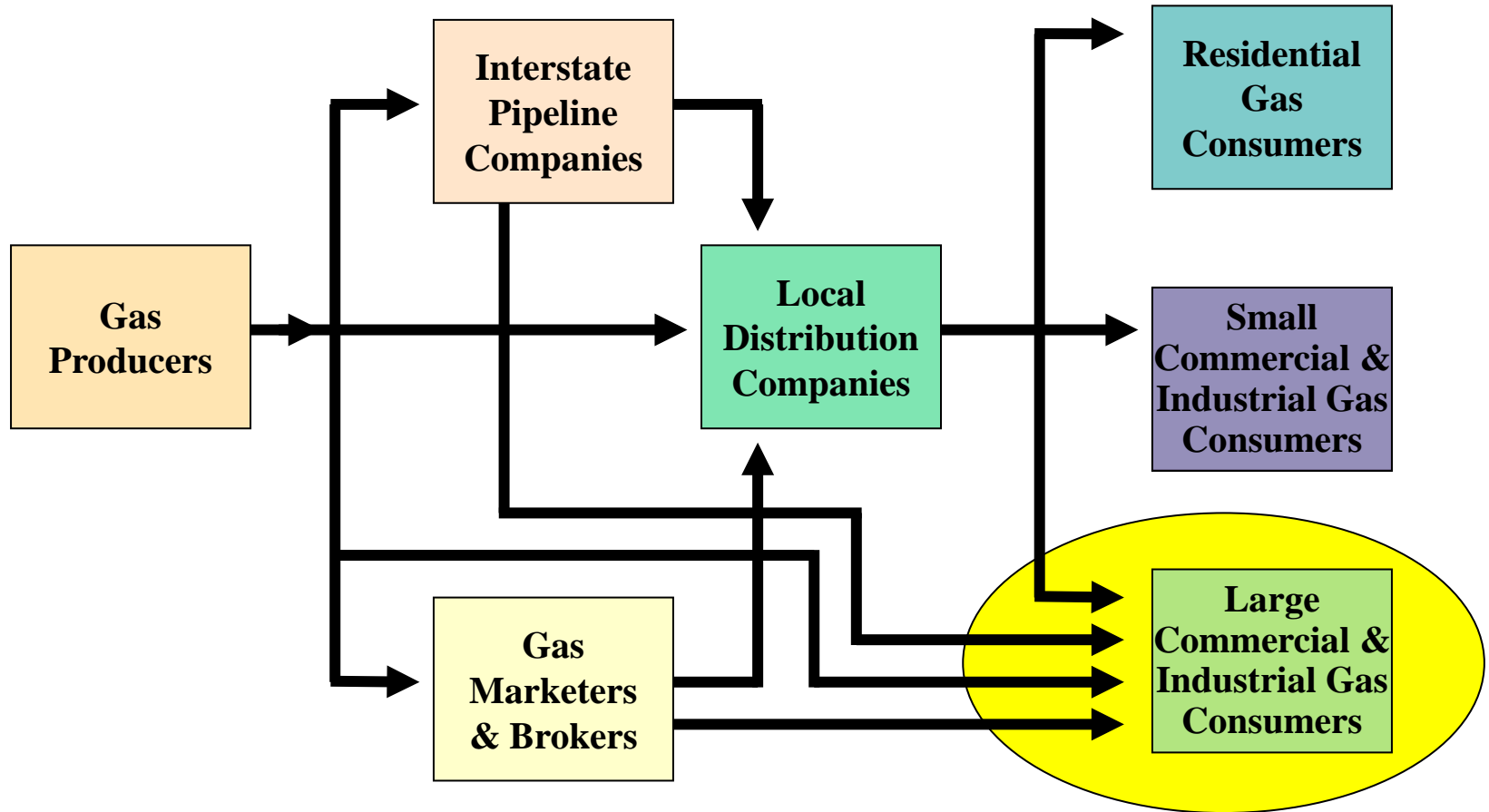
# Federal Restructuring Worked

## Intermediate Transaction Structure



# Federal Restructuring Worked

## Intermediate Transaction Structure



# Status of Restructuring Programs in the U.S.

Mid to Late 1990s

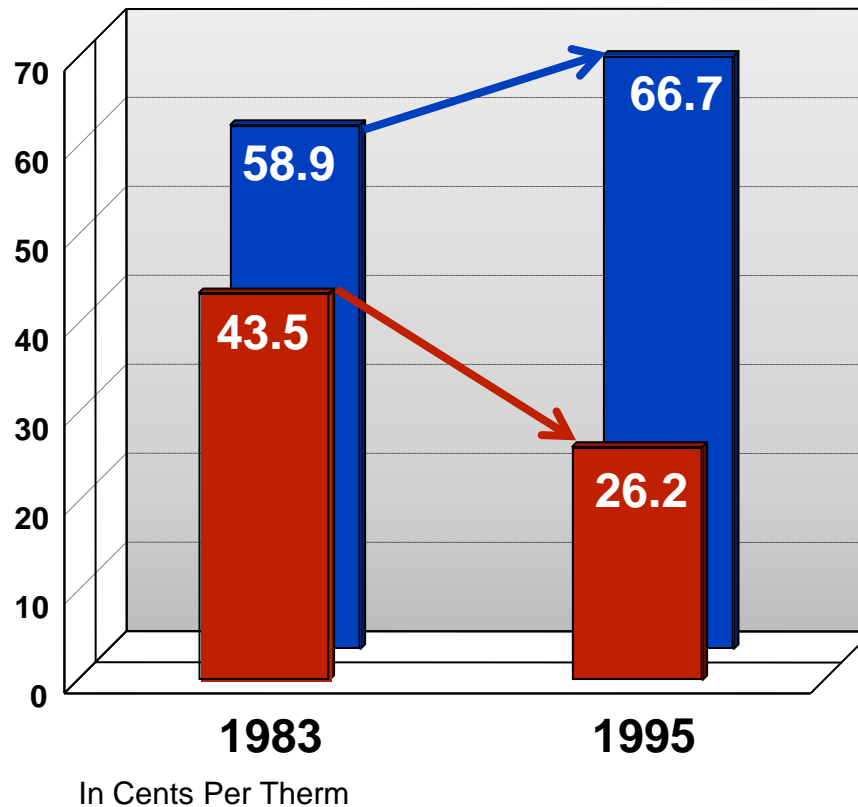
When we say that “Federal Restructuring Worked”

1. Prices generally were lowered by effective competition
2. Price signals from the burner tip were almost immediately felt at the wellhead

But, large commercial and industrial customers were the primary beneficiaries of the federal restructuring

# Natural Gas Industry Overview

Average Total Delivered Cost Per Therm Of Natural Gas  
In Georgia

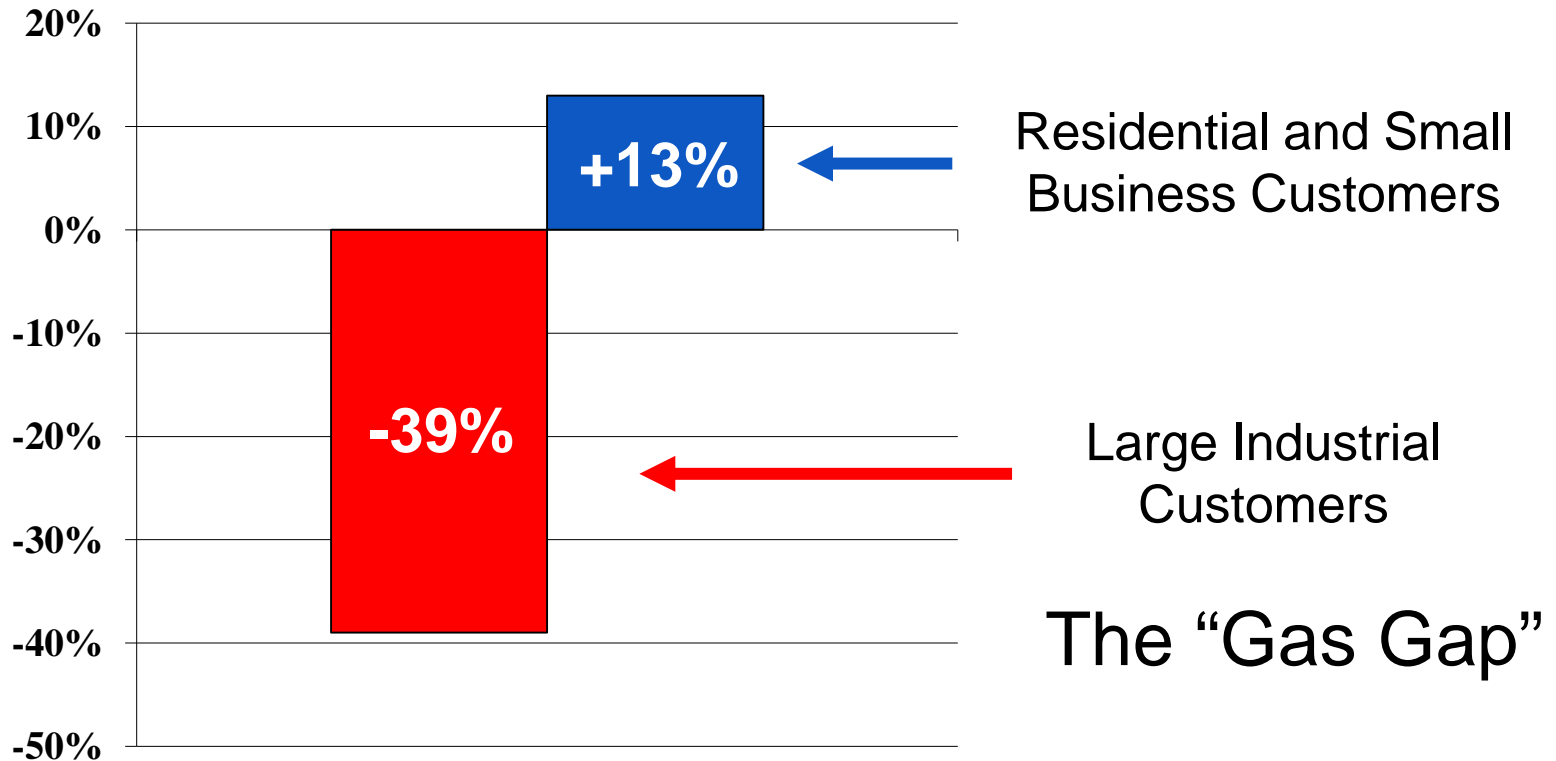


**Residential &  
Small Business**  
(more than 1.2 million  
Customers)

**Large Industrial**  
(about 650 Customers)

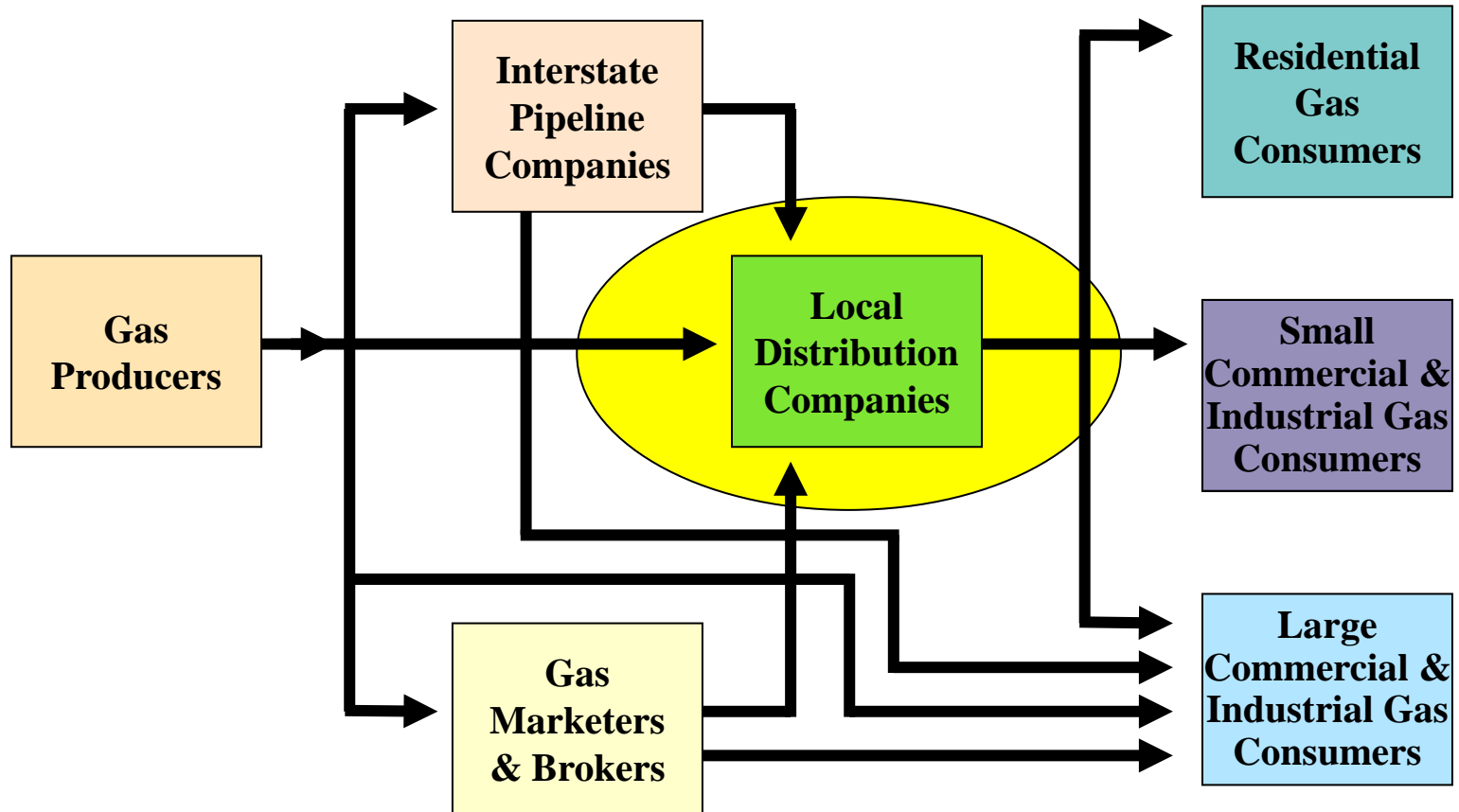
# Natural Gas Industry Overview

Change in Total Delivered Cost of Natural Gas to Georgia Customers from 1983 to 1995



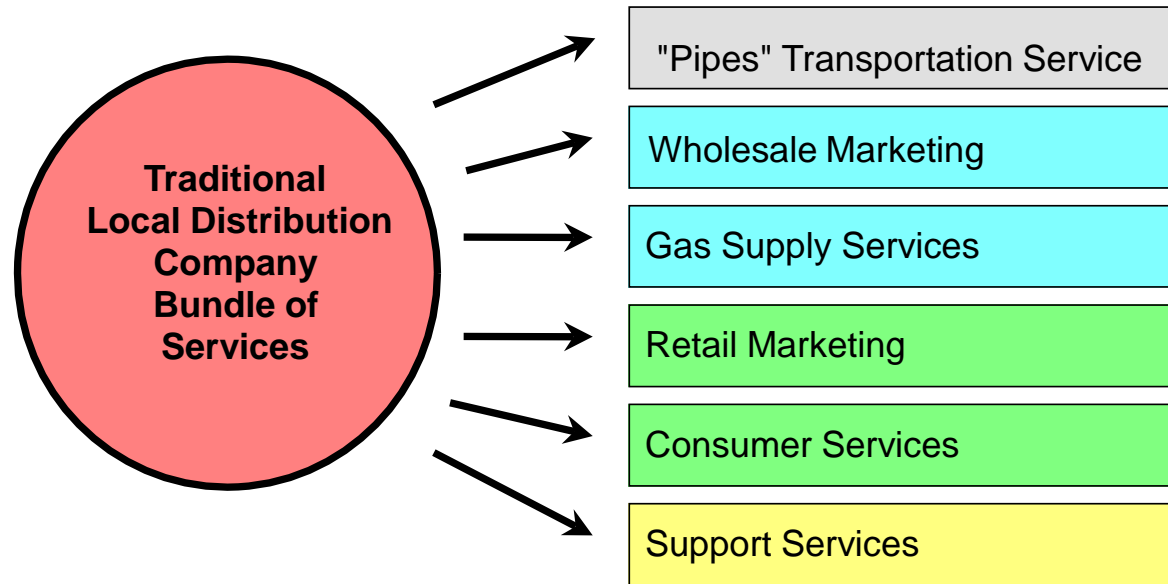
# Since Federal Restructuring Worked . . .

Q: Would restructuring LDCs provide similar benefits?

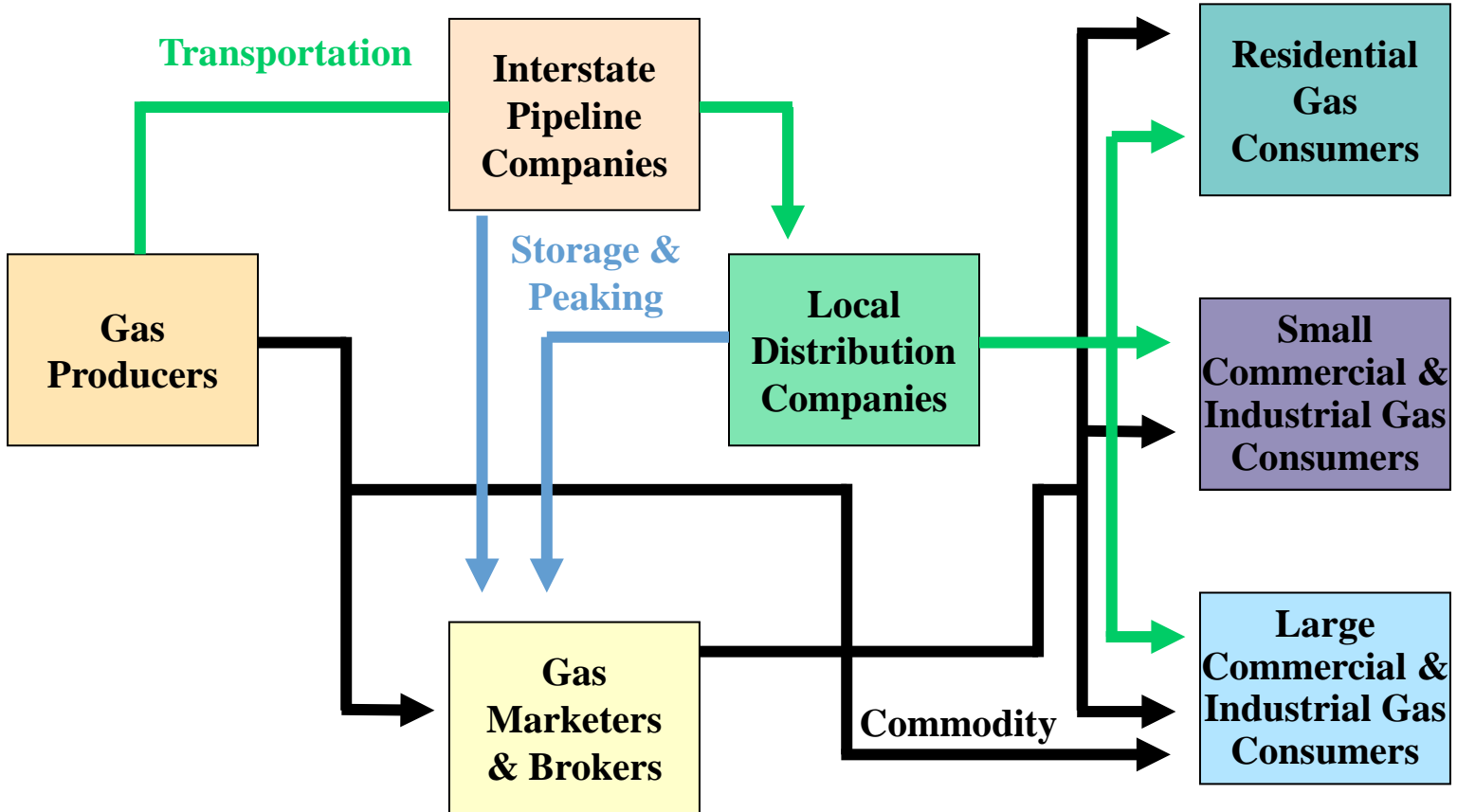




# Q: Would restructuring LDCs provide similar benefits?



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# Background of the 1997 Legislation

- By 1993-94, the historic price advantage of natural gas over competing fuels was at risk of being eroded.
- The sale of natural gas (as contrasted with the delivery of natural gas) was characterized by asymmetric regulatory risk.
- Public Service Commissions throughout the U.S. had been slow to grant LDCs sufficient flexibility to meet the competitive options available to end-use customers.
- AGL had been in rate cases almost every year for about a dozen years.
- Proposed legislation in 1996 led to formation of a legislative study committee; the study committee's recommendations led to the 1997 Natural Gas Competition and Deregulation Act.

# Georgia's Natural Gas Competition and Deregulation Act

- Opens access and unbundles gas services on the local gas company's system, creating a secondary market for interruptible delivery capacity
- Transforms the local gas company into a "pipes" business (delivering gas but not selling gas commodity) by filing notice with the PSC to become an "electing distribution company"
- Requires certification by the PSC for marketers before they sell gas to small business and residential customers
- Ensures an orderly transition from regulation to competition
- Continues regulation by the PSC of safety, access and firm delivery service, and set rates pursuant to an alternative form of regulation
- Expands jurisdiction and power of PSC to enforce fair marketing rules
- Ensures consumer safeguards and protection
- Creates a Universal Service Fund

# Georgia's Unbundling Model in a Nutshell

- LDC may elect to unbundle services, and thus become an Electing Distribution Company (EDC)
- Regulation phases out as competition increases
- Rights to assets are allocated to marketers based on the firm customers they serve
- A secondary market is created for unused firm capacity to serve interruptible customers
- Eventually, firm customers who do not select a marketer will be assigned to one
- The pipes company remains regulated; marketers are not price regulated

# LDC's Election Filing Under Georgia's Model

**Based on  
AGL's  
Election Filing  
of 11/26/97**

**Part 1:  
Traditional  
Rate Case  
Elements**

**Part 2:  
Performance-  
Based  
Regulation**

**Part 3:  
Election to  
Unbundle  
Services**

## Traditional Rate Case

Provides a "bottoms-up" starting point for unbundled services

Contains all base revenue issues of a normal LDC rate case, including:

- Capital Cost
  - Capital Structure
  - Cost of Debt
  - Return on Equity
- O & M Requirements
- Plant in Service Requirements
- Depreciation Rates
- Cost Allocation & Rate Design
- Others

## Performance-based Regulation

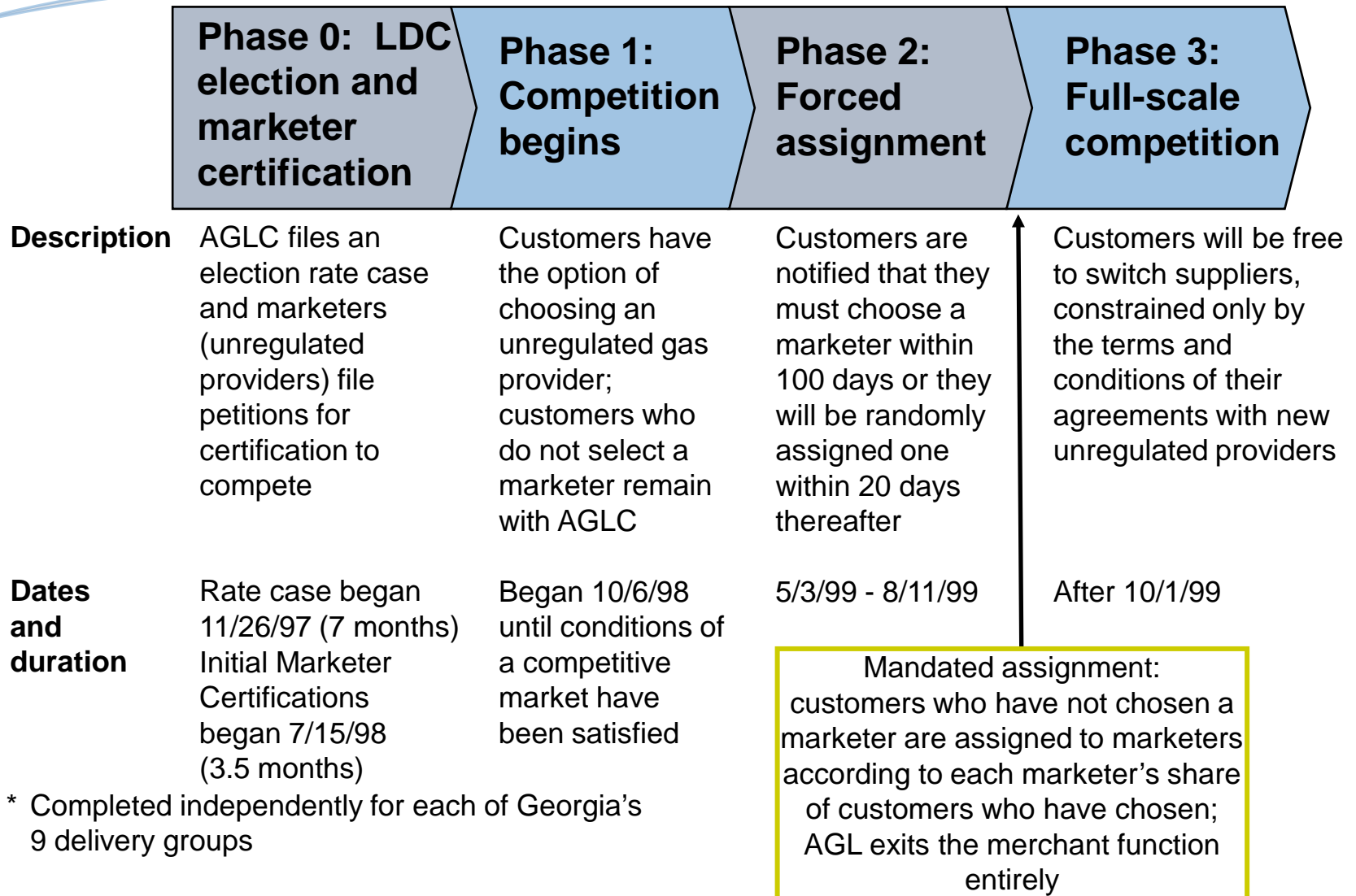
Contains both

- Specific performance incentives and
- Comprehensive performance-based regulation proposals

## Election to Unbundle Services

- Unbundles all functions that can be separated from actual distribution
- Method to Allocate Intrastate Assets and Establish Delivery Groups
- Method to Allocate Interstate Assets
- Establish the Electronic Bulletin Board
- Establish a Transition Tracker
- Establish a Universal Service Fund
- Offer Ancillary Services

# Phases of Georgia Gas Restructuring\*



\* Completed independently for each of Georgia's 9 delivery groups

# Goals of Georgia Gas Restructuring\*

1. Promote competition in the natural gas industry;
2. Protect the consumer during and after the transition to a competitive natural gas market;
3. Maintain and encourage safe and reliable natural gas service;
4. Deregulate those components of the natural gas industry subject to actual competition;
5. Continue to regulate those natural gas services subject to monopoly power;
6. Promote an orderly and expeditious transition of the natural gas industry toward fully developed competition;
7. Provide for an orderly and expeditious transition of the natural gas industry toward fully developed competition;
8. Provide for ratemaking methods which the General Assembly finds appropriate for the provision of natural gas services, including without limitation the use of straight fixed variable rate design, the recovery of certain stranded costs, and the use of alternative forms of rate regulation;
9. Allow gas companies the opportunity to compete effectively in a competitive marketplace; and
10. Provide a bill of rights for consumers.

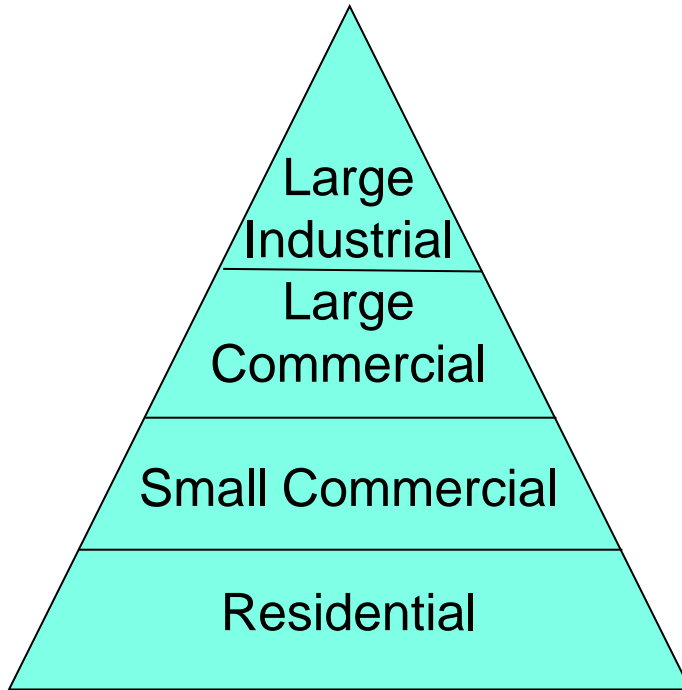
*\*O.C.G.A. § 46-4-151*



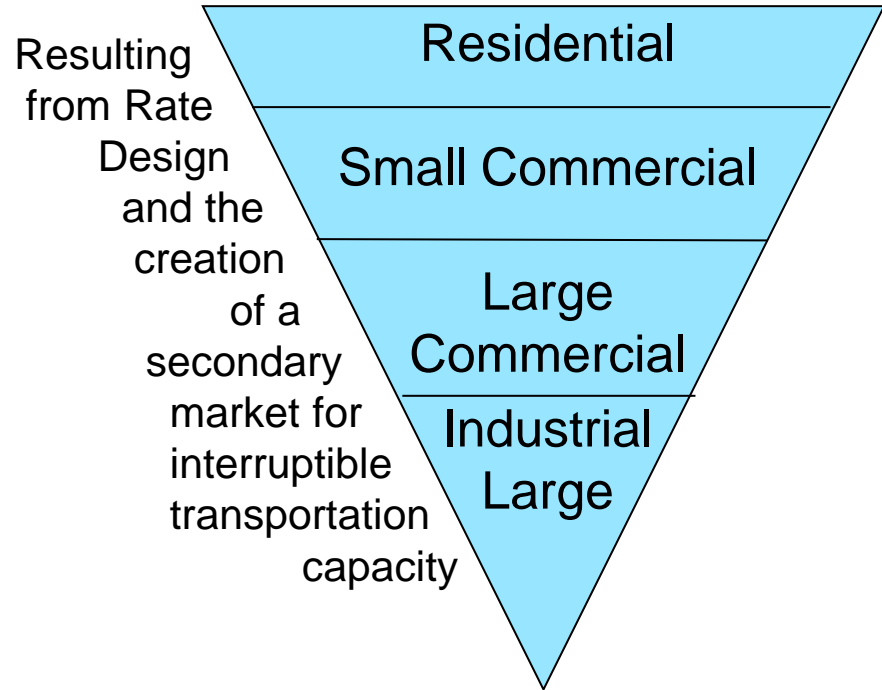
# Guiding Principles for Restructuring Design

1. Emphasize the importance of residential and small commercial customers.

Common Early Customer Choice  
Valuation Perspective



Georgia Unbundling Customer  
Valuation Perspective



Ensure that appropriately robust consumer safeguards are in place and enforced.

# Guiding Principles for Restructuring Design

## 2. Allow competition where a particular product or service is competitive or highly contestable.

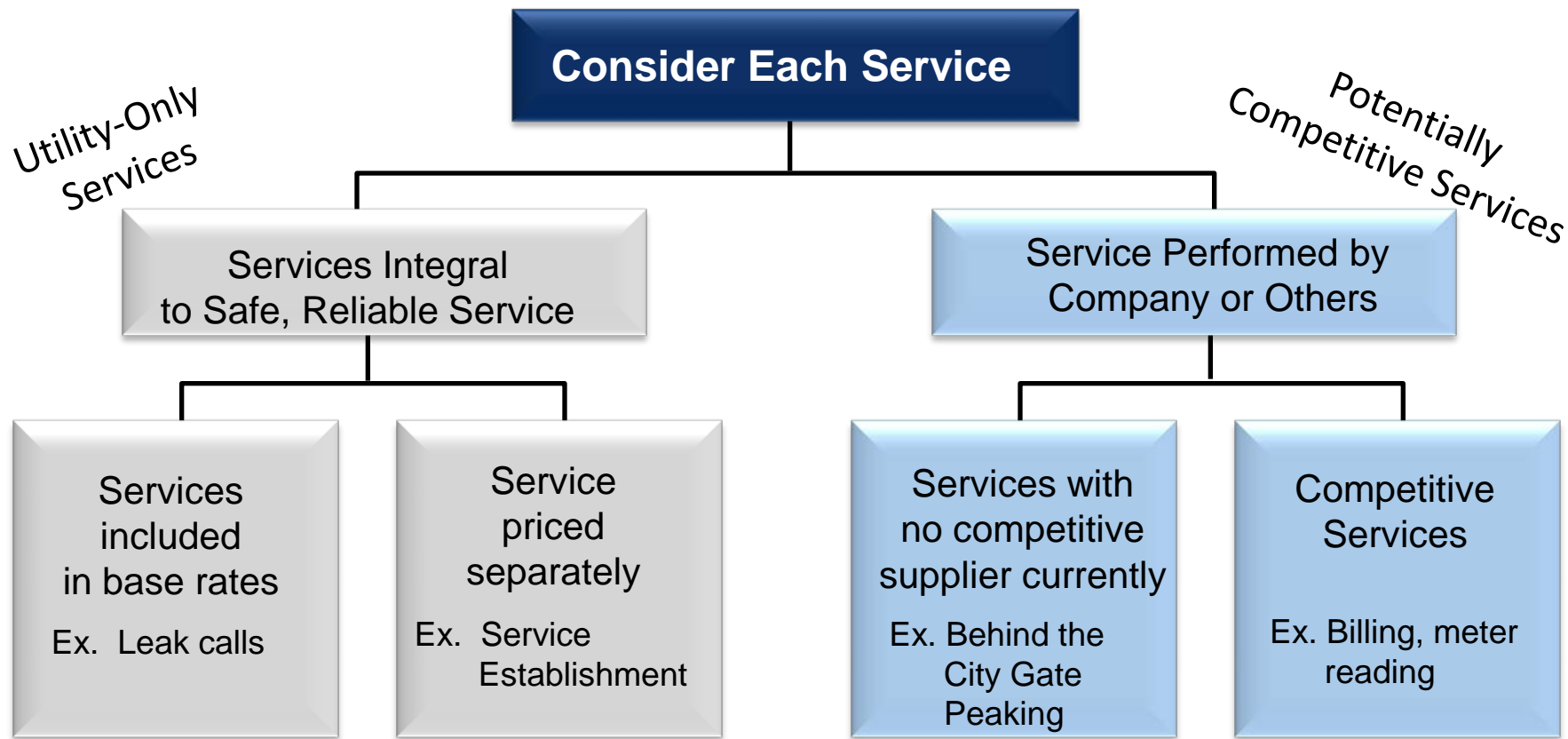
**Competitive** markets are characterized by: multiple sellers; multiple buyers; market share sufficiently distributed among the sellers such that none of the market participants can set prices for anything other than their own products; an essentially equivalent commodity being sold; market transparency; and market contestability.

**Contestable** markets may achieve the same result, with fewer market participants, because the barriers to entry are relatively low, thus allowing new entrants into the market if the existing group of providers fail to meet the customers' needs and expectations.

Potential **Market Entry Barriers** potentially include: access to interstate transportation and out-of-state storage; access to interstate transportation and storage capacity, access to peaking services, ability to provide ancillary services, capital requirements, and requirements for a workforce with appropriate technical abilities

# Guiding Principles for Restructuring Design

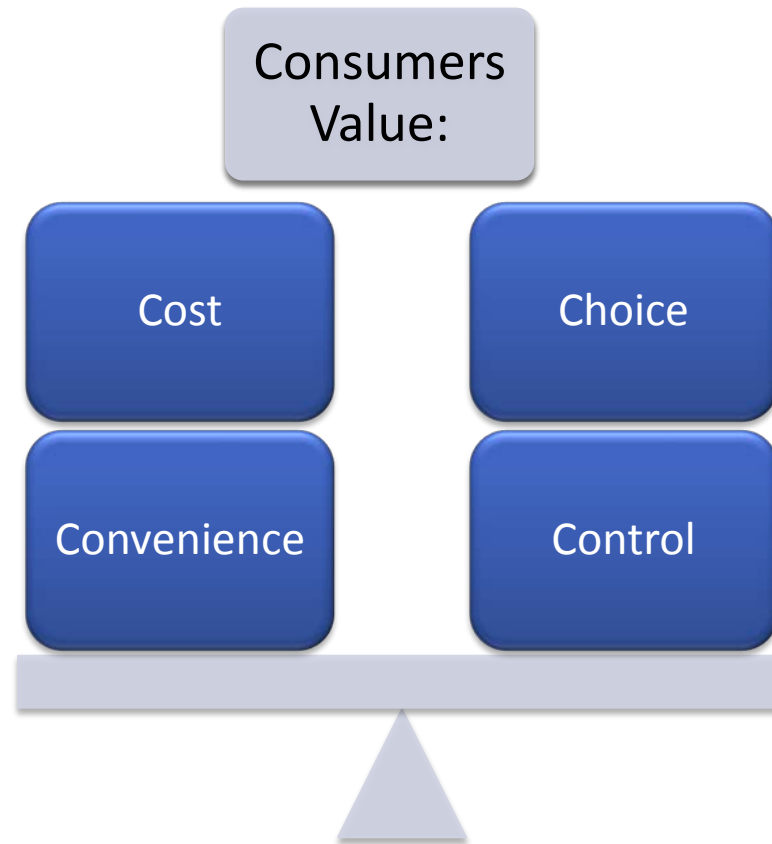
3. Continue (or revise) regulation where products and services are not competitive or contestable, or where required for safe operation.



The approach to regulation and ratemaking should depend on the category.

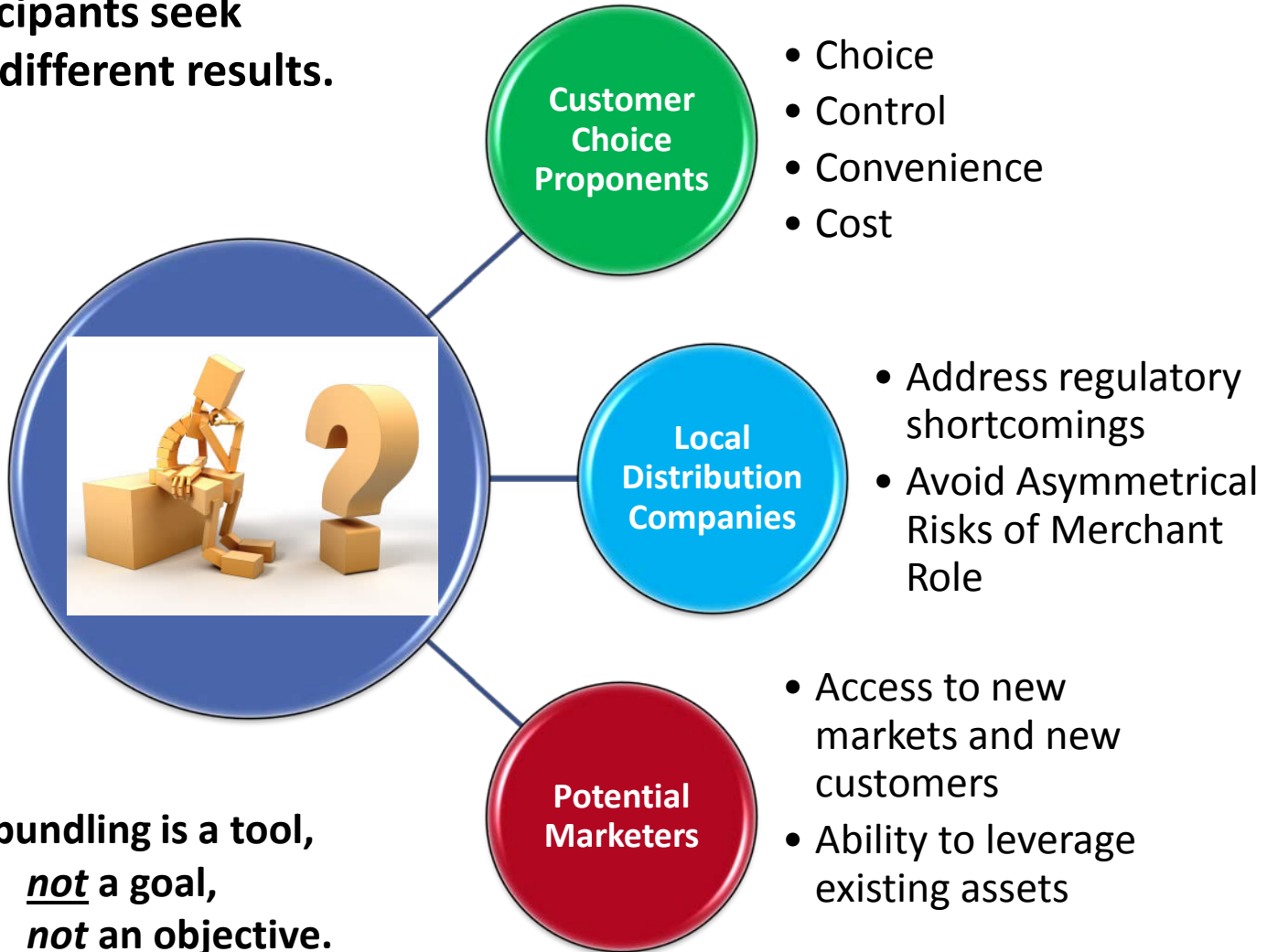
# Guiding Principles for Restructuring

4. Allow Marketers an opportunity to offer products and services that consumers value.



# Why Unbundle LDC Services?

Participants seek  
very different results.



Unbundling is a tool,  
not a goal,  
not an objective.

# Lessons Learned

## A. The extent to which potential benefits are achievable

### 1. *Customer Choice Proponents*

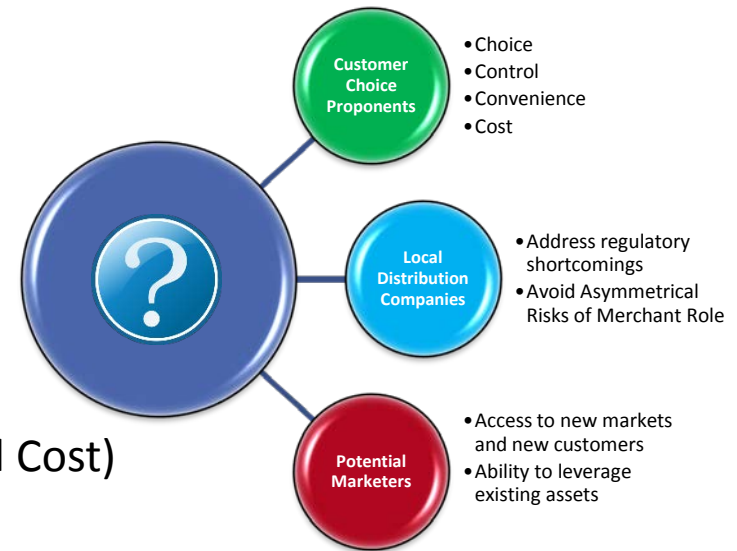
- The 4 Cs (Choice, Control, Convenience and Cost) can be achieved, but are not assured
- Based on choices in the marketplace, Customers value factors other than cost

### 2. *LDCs*

- Regulation of the LDC continues, unbundled or not
- Merchant-related asymmetrical risk continues as long as *any* regulated merchant role continues
- LDCs should seek other avenues to address regulatory issues

### 3. *Potential Marketers*

- More marketers fail than succeed
- Marketers can successfully add value



# Lessons Learned

## B. Costs associated with the *benefits obtained*

### 1. *Customer Choice Proponents*

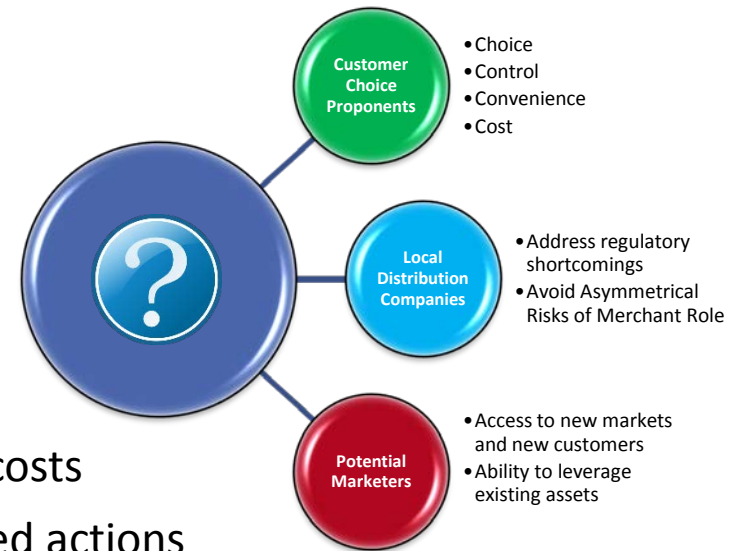
- Total customer bills may exceed regulated costs
- Convenience may be compromised by forced actions

### 2. *LDCs*

- Much more complex business model
- Potential for stranded costs; mismatch of avoided costs to avoided revenues
- Transformation of required workforce skill sets

### 3. *Potential Marketers*

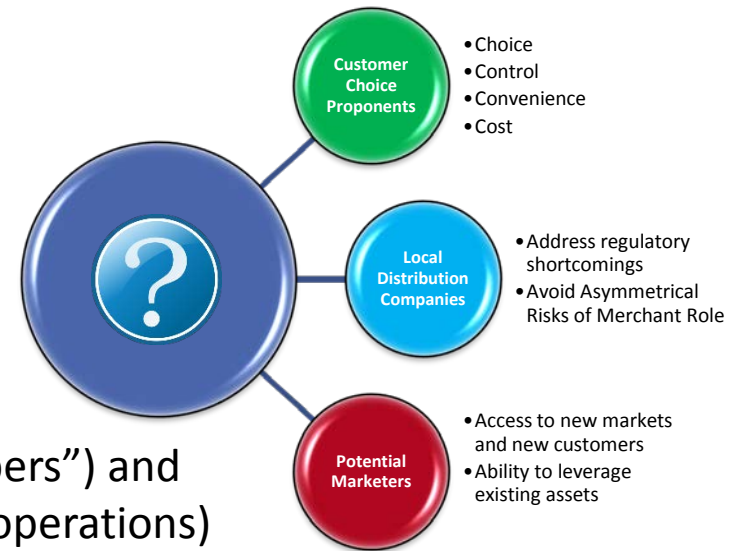
- Substantial investment required to achieve market presence
- Multiple “incumbent” participants complicate customer choices
- Regulatory risks compound business risks



# Lessons Learned

## C. Challenges to service reliability and operational integrity

- It is difficult to balance between setting marketer qualification:
  - too stringent (which tends to limit “scrappers”) and
  - too lenient (which can jeopardize system operations)
- If any one marketer fails to meet daily delivery requirements, the entire system may be compromised
- Some marketers appear to have realized substantial income from knowing and fully applying system rules governing supply imbalances and make-up provisions
- In Georgia alone, nearly 30 marketers did not sustain a position in the market \*
- It is critical that the LDC have business rules in place to maintain system control and to ensure that marketers view compliance as the preferred business option



\* Southeastern States Energy (also filed bankruptcy); KeySpan; A C N Energy; Williams Energy Services Co.; Volunteer Energy Services, Inc.; Valdosta Natural Gas Services, Inc.; PanCanadian Energy Services; Optimum Energy Services, Inc. (dba Peachtree also filed bankruptcy); (Shell purchased Peachtree’s customers); DukeSolutions; FPL Energy Services; UtiliCorp Energy Solutions (certificate revoked); Titan Energy (also known as United Gas Management filed for bankruptcy); Phelts Natural Gas Associates; The New Power (also filed for bankruptcy); Columbia Energy Services (transferred customers to New Power); Texas-Ohio Gas (dba e Prime); NorAm Energy Management (changed name to Reliant Energy); Duke Energy And Trading and Marketing; Southern Company Gas (purchased New Power’s customers); Energy America (sold their customers to SCANA); Vectren Retail (transferred customers to Gas South); Usave Catalyst (also filed bankruptcy); Dominion Retail; Shell (transferred customers to MXEnergy); Utility Resource Solutions (became Spark Energy); Constellation NewEnergy-Gas; PSEnergy Group dba GasKey (transferred customers to MXEnergy); and SONAT Energy Inc.



# Common Program Issues

- A. Defining and staging eligible customers
- B. LDC's Merchant Function
- C. Ancillary Services
- D. Access to Customer Information
- E. Customer Education
- F. Upstream Assets
- G. Rules Governing the Unbundled Market
- H. Default Provider and Provider of Last Resort
- I. Conversion of Legacy Systems
- J. Transitional Costs and Revenues
- K. Other Customer Protection Provisions

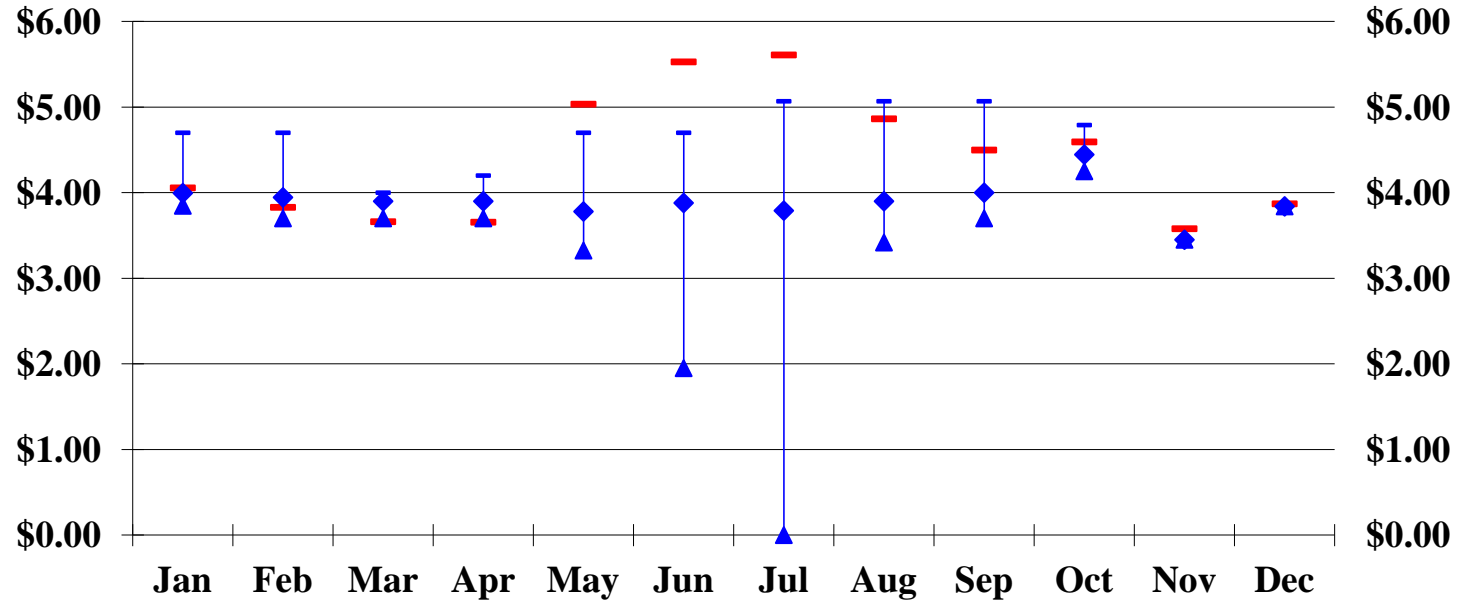
# Prices Charged by Marketers and AGL for Residential Natural Gas Commodity

## ***Observations from Georgia's Experience Did Georgia provide consumers the 4 Cs?***

- Customers have had the *opportunity* to pay less for gas after competition began than they did in the year prior to competition.
- Nonetheless, customer choice participants also have had the opportunity to pay more for gas since restructuring.
- Deregulation has produced choices for end-use customers.
- There has been a wide range of pricing options available.
- In most months, significant savings could be realized by end-use customers who made prudent choices in the restructured market.
- During the period shortly following the Georgia restructuring, the median marketer price was below the regulated PGA price about 75% of the time.
- It was possible to get an unregulated price that was below the regulated price 100% of the time.

# Prices Charged by Marketers and AGL's PGA for Residential Natural Gas Commodity

(\$/Dth)



— AGLC PGA Pre-Dereg

— High Marketer Price Post-Dereg

▲ Low Marketer Price Post Dereg

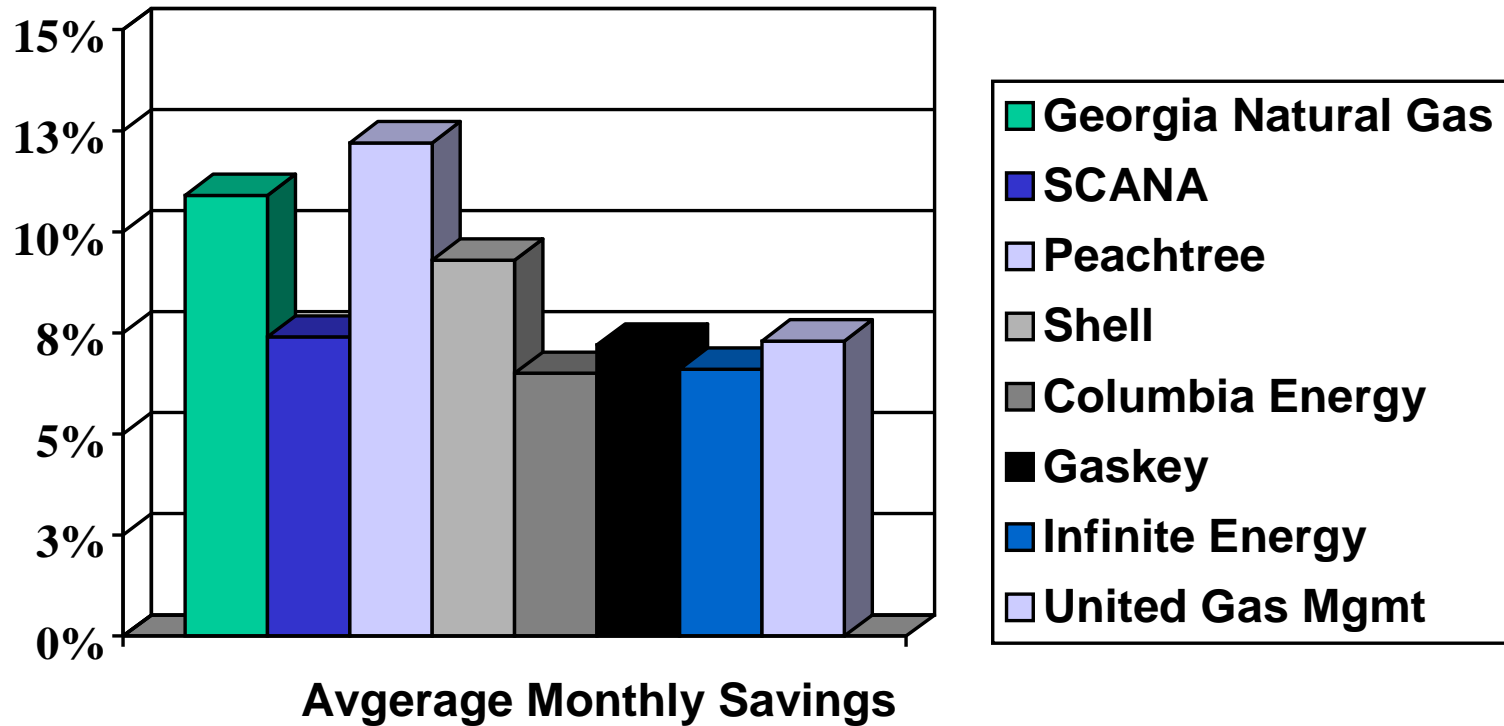
◆ Median Marketer Price Post Dereg

Marketer gas cost based on published rates in the *Atlanta Journal & Constitution* and/or marketers stated charges for the period from November 98 to October 99.

AGL PGA cost from filings with the GA PSC for the period from November 97 to October 98. AGLC PGA is a 12 month rolling average.

# Average Monthly Savings by Marketer

## First 9 Months of Customer Choice



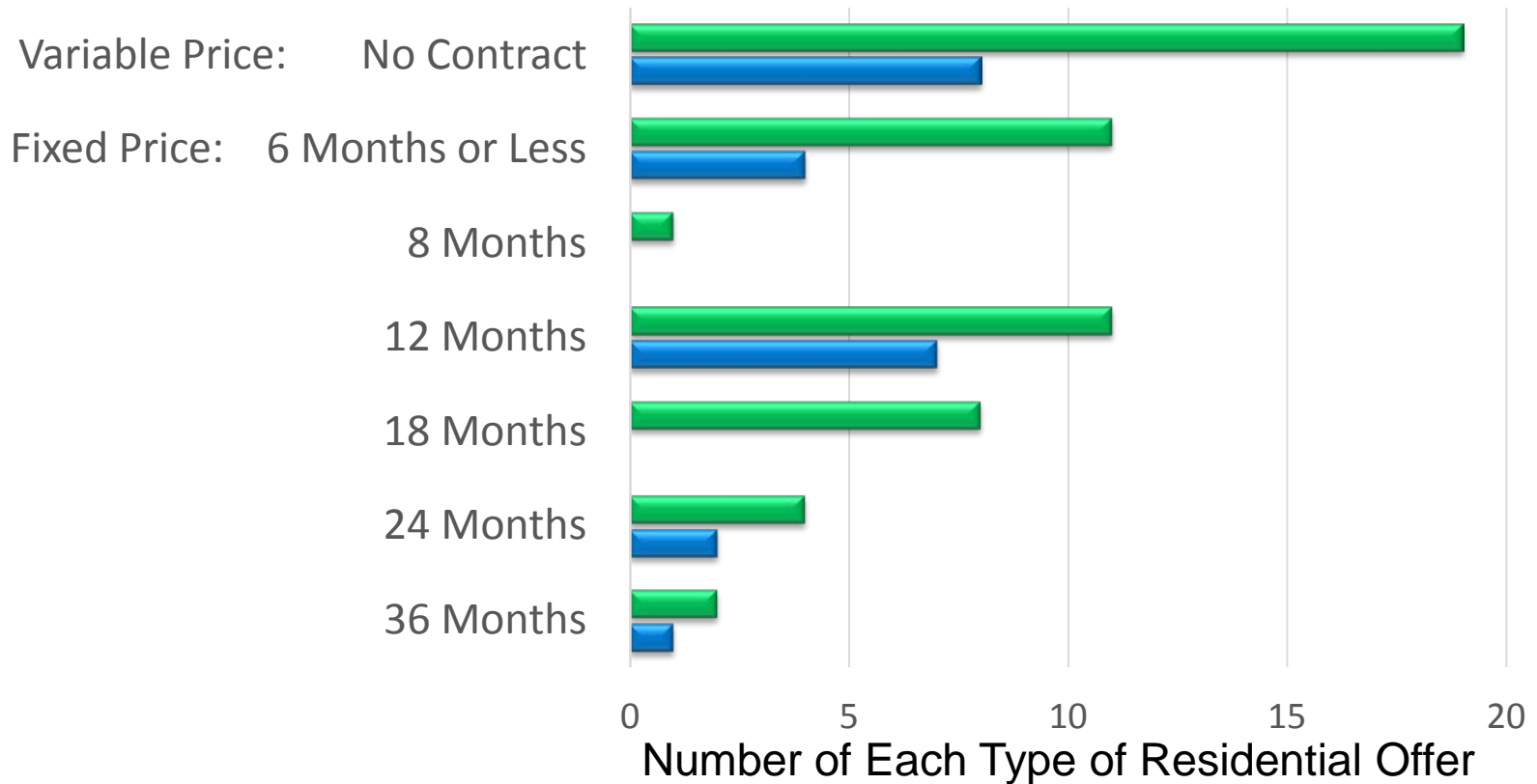
Source: Calculations based on published data in the *Atlanta Journal-Constitution* for November 1998 to July 1999.

# Types of Offers Available in the Initial Month

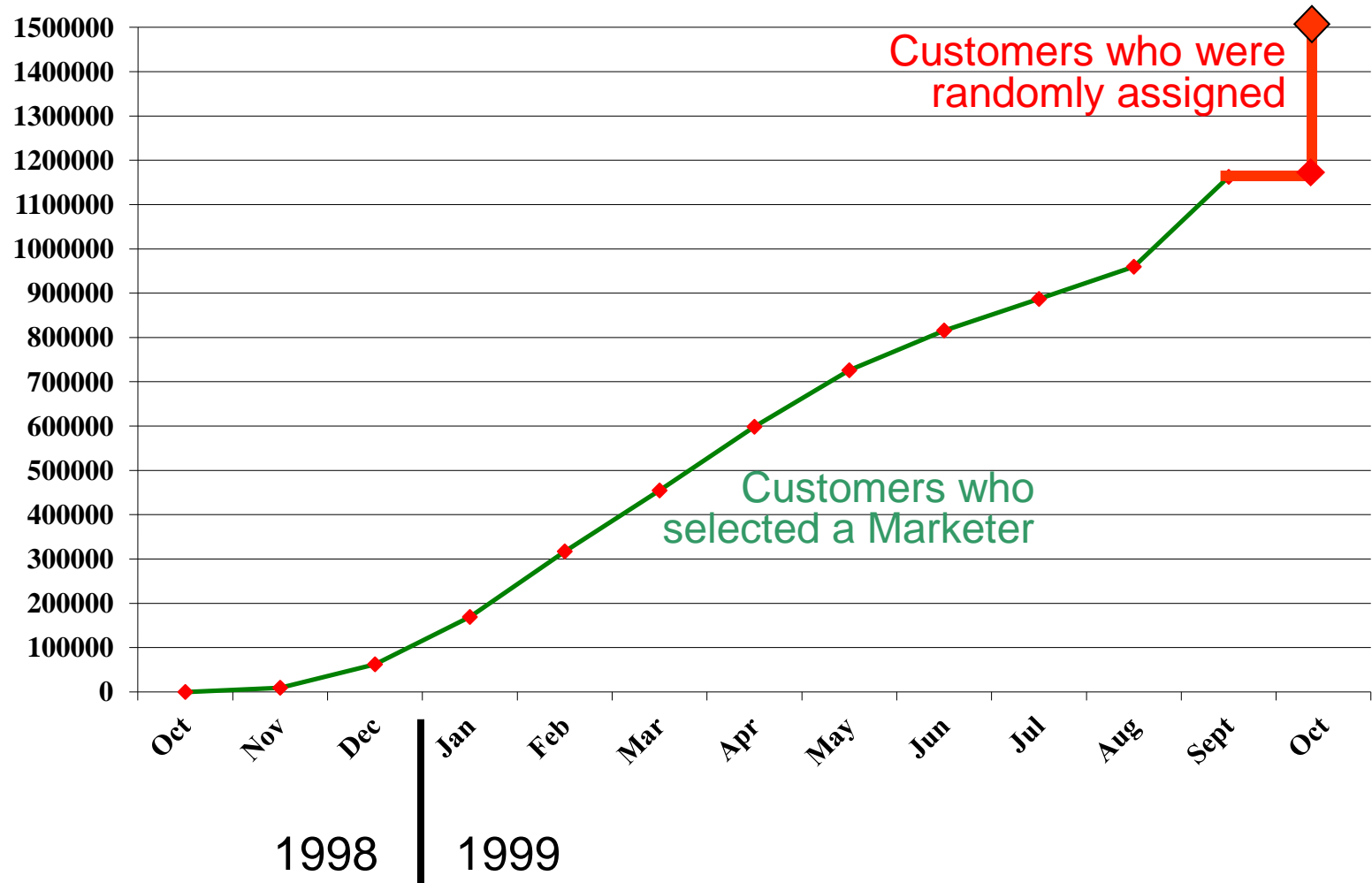
Residential choice customers like having options, and the Market has responded.

**November 2015 – 63 Unique Options**

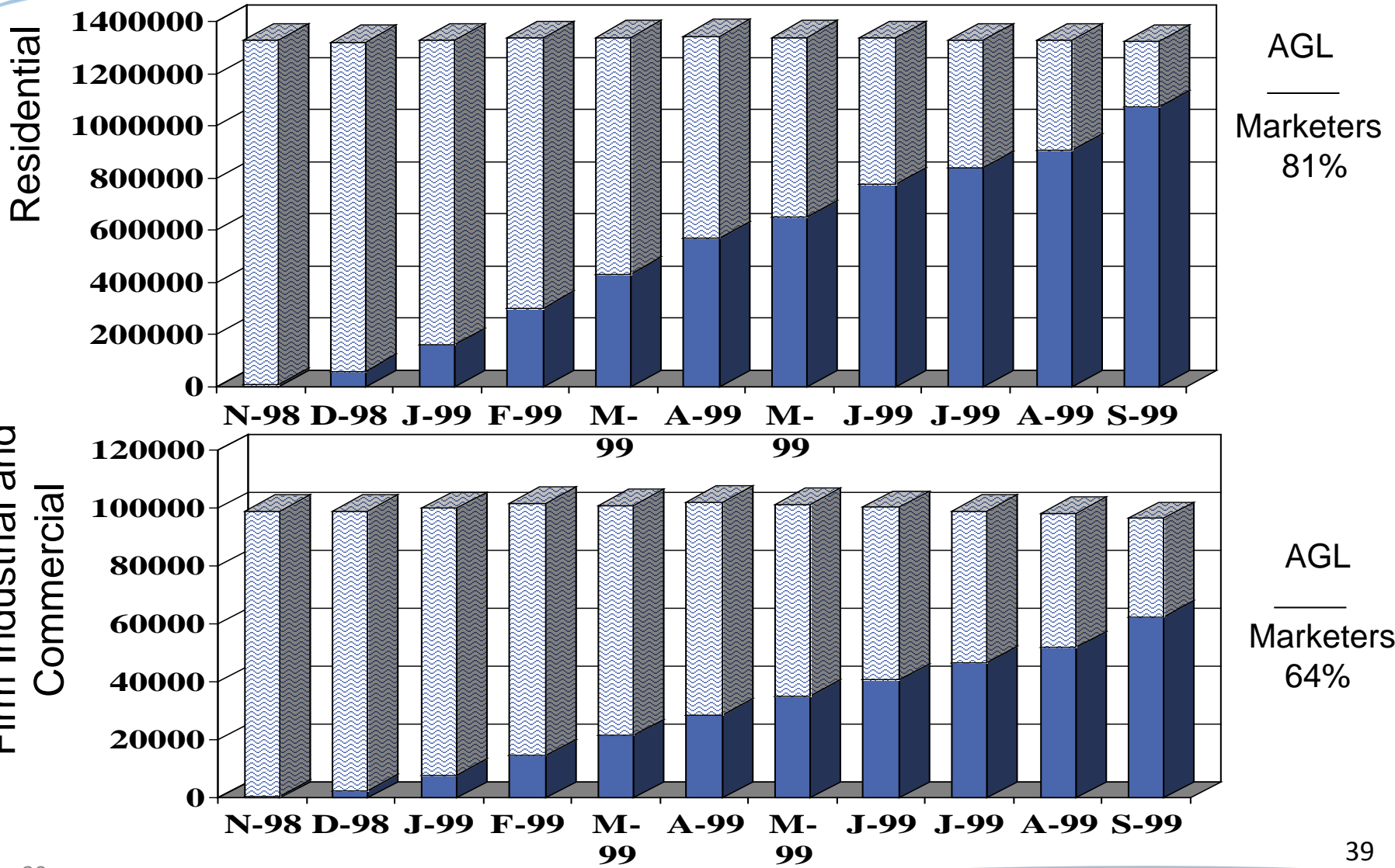
**November 1998 – 22 Unique Options**



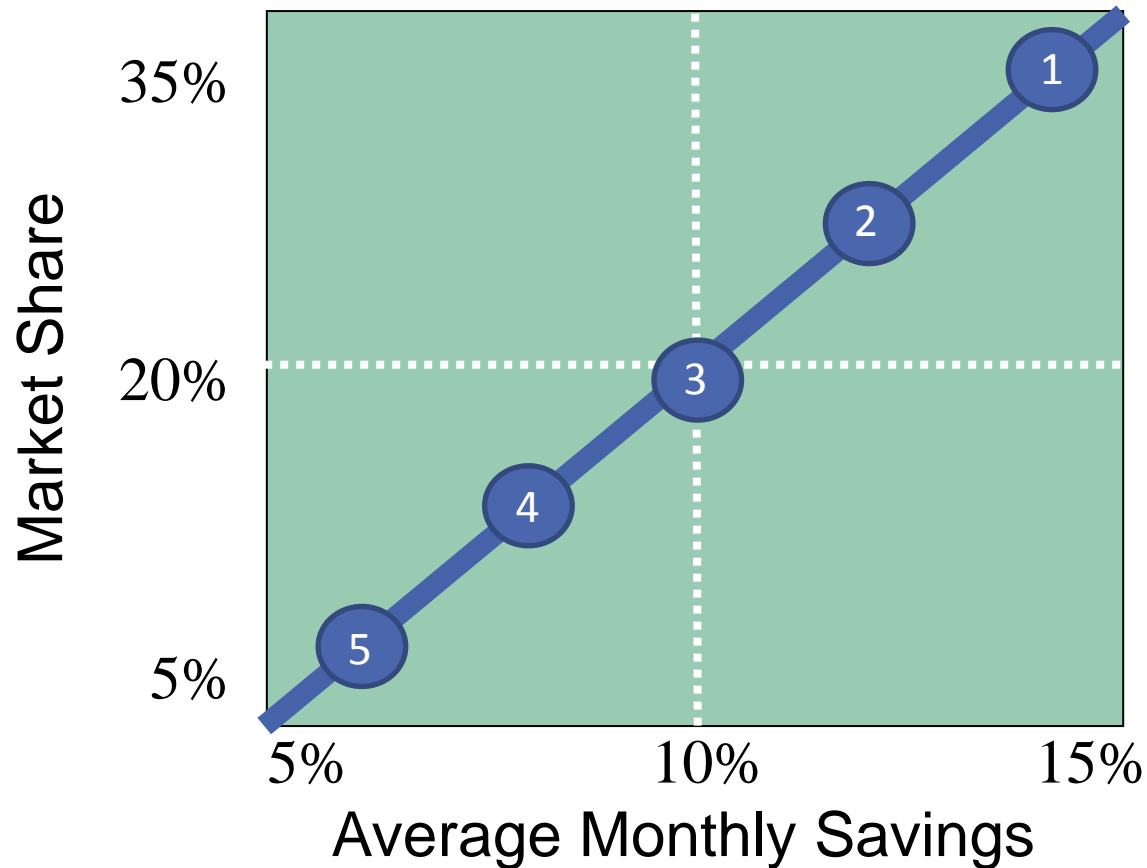
# Customers Served by Marketers on AGL's System



# Percentage of End-use Customers Who Selected a Marketer Within 10 Months



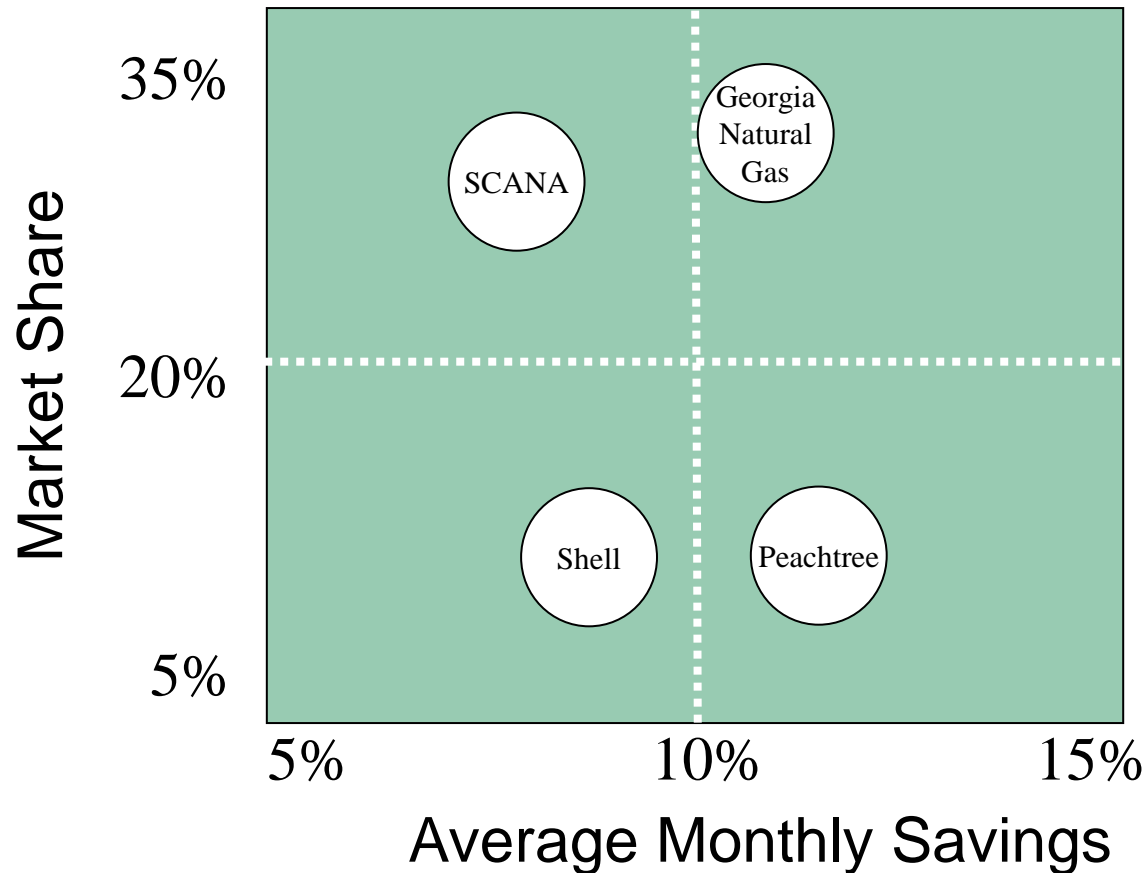
# If price were the major driver of consumer behavior:



We would expect to see higher discounts = higher market share.



# Average Monthly Savings vs. Market Share



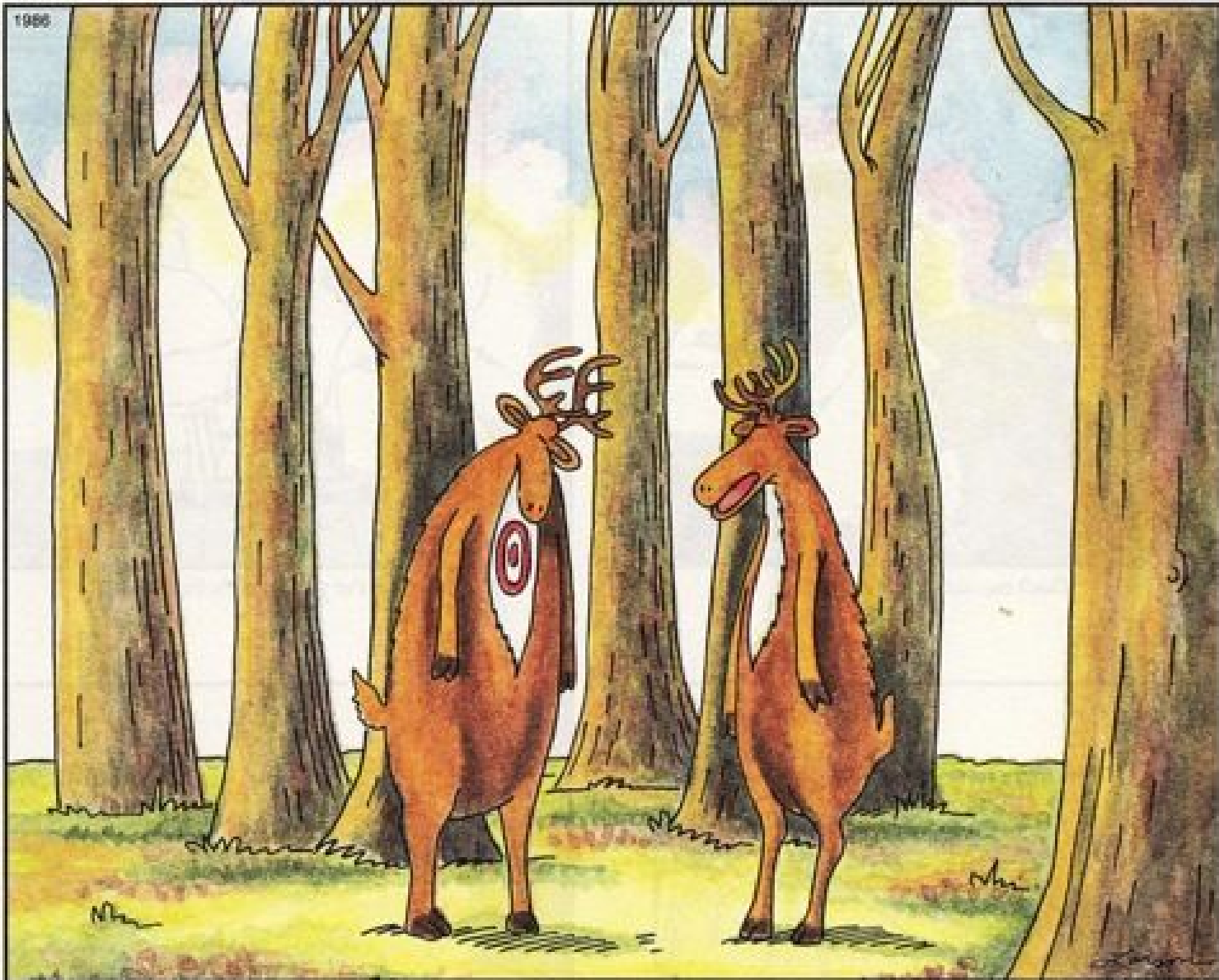
Based on data published in the *Atlanta Journal - Constitution*

# Observations That May Apply Elsewhere

- Successful implementation requires disciplined continuity by market participants and policy makers
- Price is not the only consideration for customers choosing a new supplier. COST – CONTROL – CONVENIENCE – CHOICE
- Different customers have different preferences and responded to different supply offers
- Creativity is rewarded in the marketplace
- Customers MAY benefit by:
  - Lower average prices
  - Expanded supply options
  - New suppliers and new service offerings

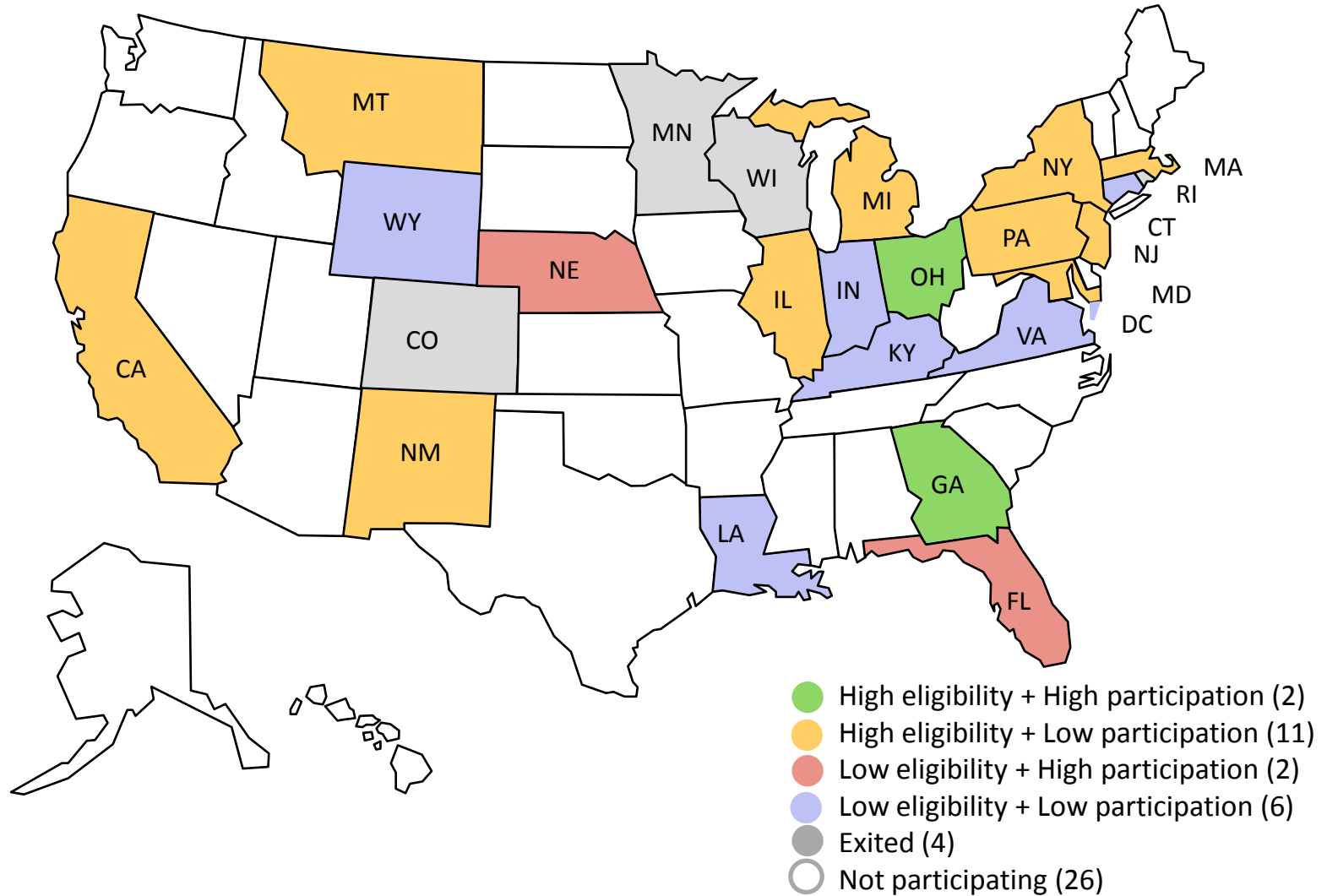
# Program Features that Define Markets

- What ancillary services to offer
- Rate design considerations
- Role of the LDC regarding the merchant function
- Enhanced consumer protection
- Fair marketing rules
- Upstream assets
- Stranded costs
- Provider of Last Resort

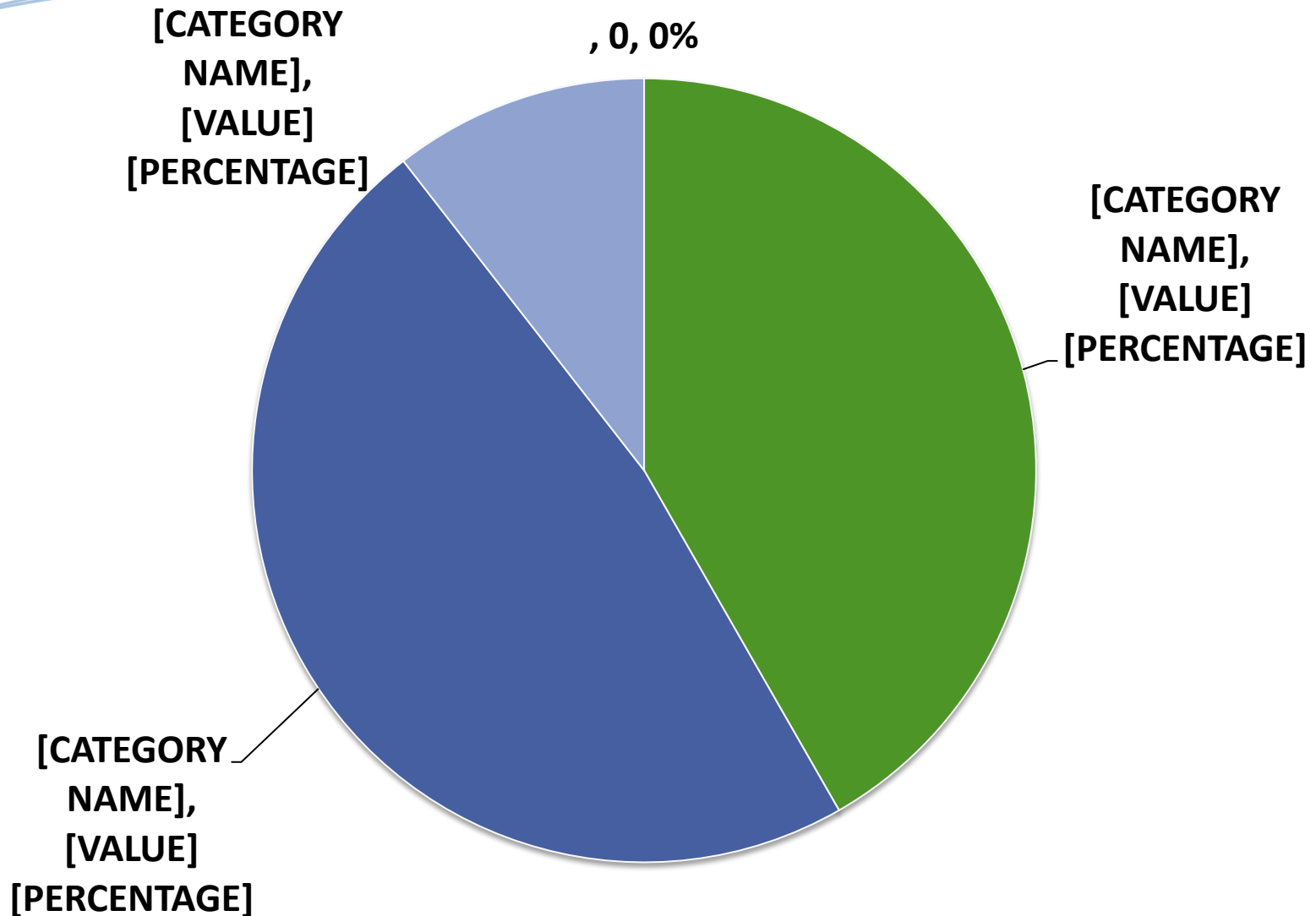


"Bummer of a birthmark, Hal."

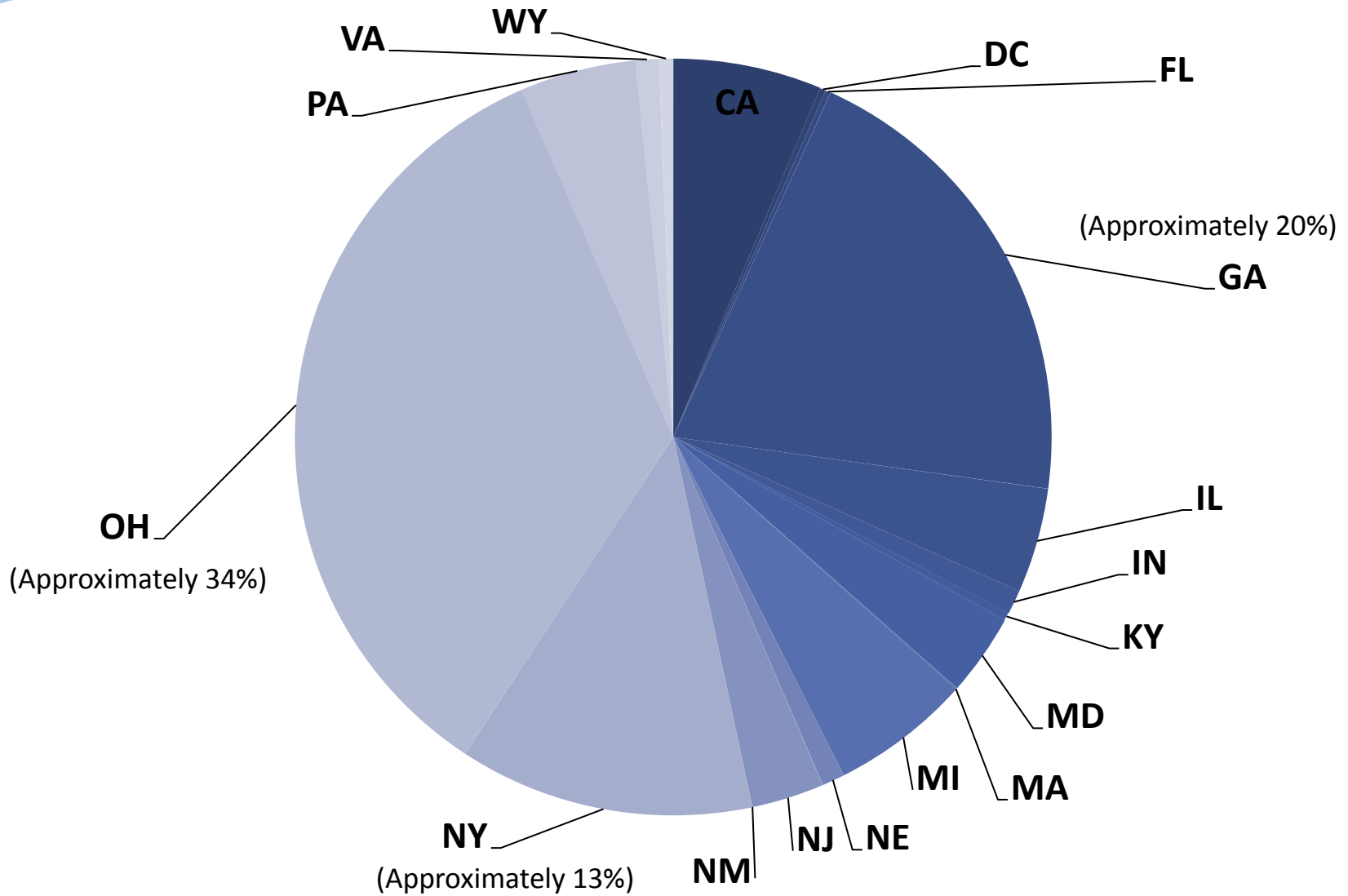
# Residential Customer Choice Programs: State of the States



# Residential Customer Choice Programs: State of the States



# Residential Customer Choice Programs: Who Participates



## States Ranked by Percent of Total Residential Customers Participating

STATE CODE	State	Total Residential Natural Gas Consumers	Consumers Eligible to Participate	Participating	% of Total Consumers Eligible	% of Total Consumers Participating	% of Eligible Consumers Participating
GA	Georgia	1,739,543	1,420,365	1,418,492	81.65%	81.54%	99.87%
OH	Ohio	3,244,274	3,125,334	2,493,044	96.33%	76.84%	79.77%
WY	Wyoming	157,226	69,459	38,318	44.18%	24.37%	55.17%
NY	New York	4,364,169	3,937,495	913,000	90.22%	20.92%	23.19%
MD	Maryland	1,078,978	1,058,288	213,605	98.08%	19.80%	20.18%
MI	Michigan	3,403,694	3,130,495	467,624	91.97%	13.74%	14.94%
NE	Nebraska	515,336	68,039	68,039	13.20%	13.20%	100.00%
PA	Pennsylvania	2,678,547	2,530,104	312,940	94.46%	11.68%	12.37%
DC	District of Columbia	145,938	145,121	16,316	99.44%	11.18%	11.24%
US	Total	66,624,457	38,222,873	6,758,758	57.37%	10.14%	17.68%
NJ	New Jersey	2,671,308	2,668,678	203,788	99.90%	7.63%	7.64%
IL	Illinois	3,878,056	2,924,874	278,200	75.42%	7.17%	9.51%
VA	Virginia	1,155,636	698,094	67,821	60.41%	5.87%	9.72%
IN	Indiana	1,673,132	730,906	85,648	43.68%	5.12%	11.72%
KY	Kentucky	757,790	120,446	26,138	15.89%	3.45%	21.70%
FL	Florida	687,021	16,552	15,393	2.41%	2.24%	93.00%
CA	California	10,681,916	10,239,304	137,155	95.86%	1.28%	1.34%
MT	Montana	259,957	186,237	469	71.64%	0.18%	0.25%
MA	Massachusetts	1,447,947	1,418,176	2,015	97.94%	0.14%	0.14%
CT	Connecticut	504,138	1,039	469	0.21%	0.09%	45.14%
LA	Louisiana	963,082	556	225	0.06%	0.02%	40.47%
NM	New Mexico	561,713	468,454	59	83.40%	0.01%	0.01%
CO	Colorado	1,659,808	1,217,972	-	73.38%	0.00%	0.00%
MN	Minnesota	1,445,905	747,266	-	51.68%	0.00%	0.00%
RI	Rhode Island	228,487	228,487	-	100.00%	0.00%	0.00%
WI	Wisconsin	1,681,001	1,071,132	-	63.72%	0.00%	0.00%

Source: Energy Information Administration 2014 Annual Report (based on 2013 Annual Data)



# Competition in Natural Gas

Georgia Natural Gas  
Competition and Deregulation Act  
1998 to 2015