



# *Regulatory Trends and the Status of Deregulation in the Natural Gas Business*

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# Natural Gas: Clean, Abundant, Efficient, Domestic



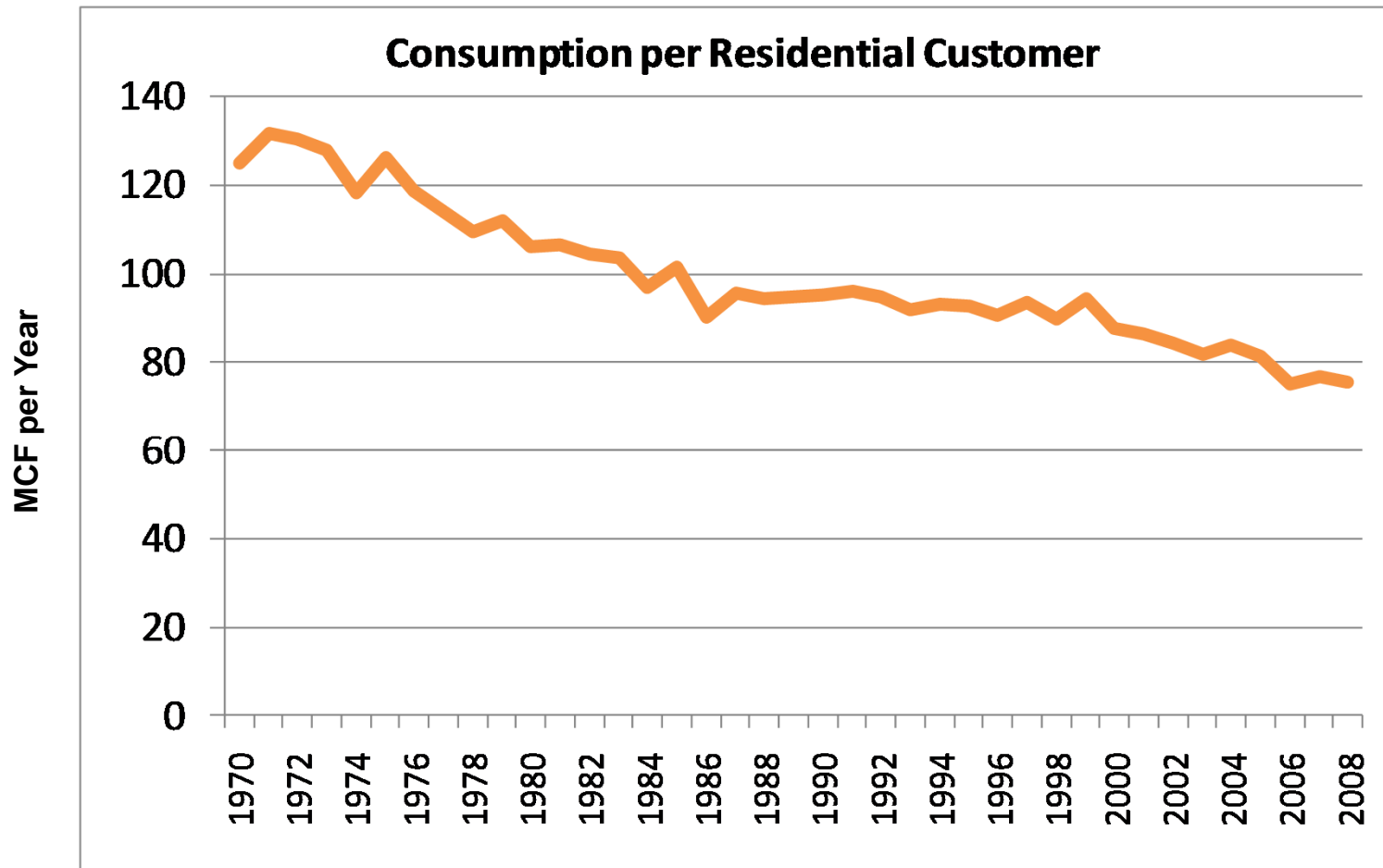
# Outline

- Deregulation Equals Customer Choice
- Recent Industry Regulatory Trends
  - Declining Use
  - Pipeline Replacement
  - Others
- Current Issues in Natural Gas Cost Recovery
  - Traditional Rate Design
  - Deregulation and Customer Choice
  - Innovative Rate Designs
  - Tracking Mechanisms

# Recent Industry Trends

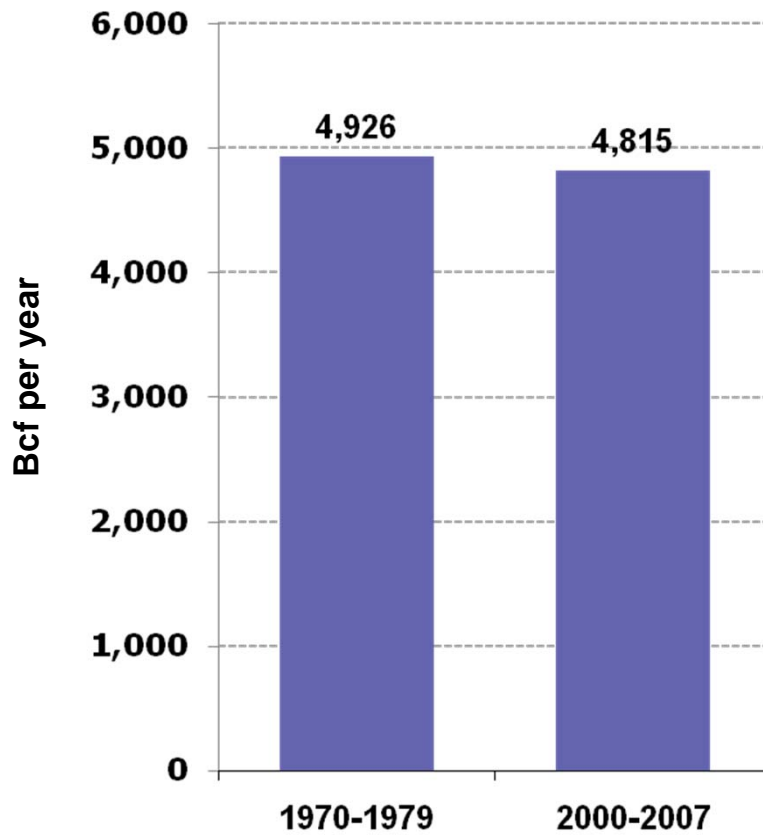
- Slowdown in Load Growth
- Aging Infrastructure
- Safety and Integrity Incidents
- System Expansion Impediments
- Changing Techniques of Cost Recovery
- Financial Market Conditions
- Other Regulatory Initiatives
- Environmental Concerns
- IFRS

# Declining Use per Natural Gas Residential Customer Since 1970

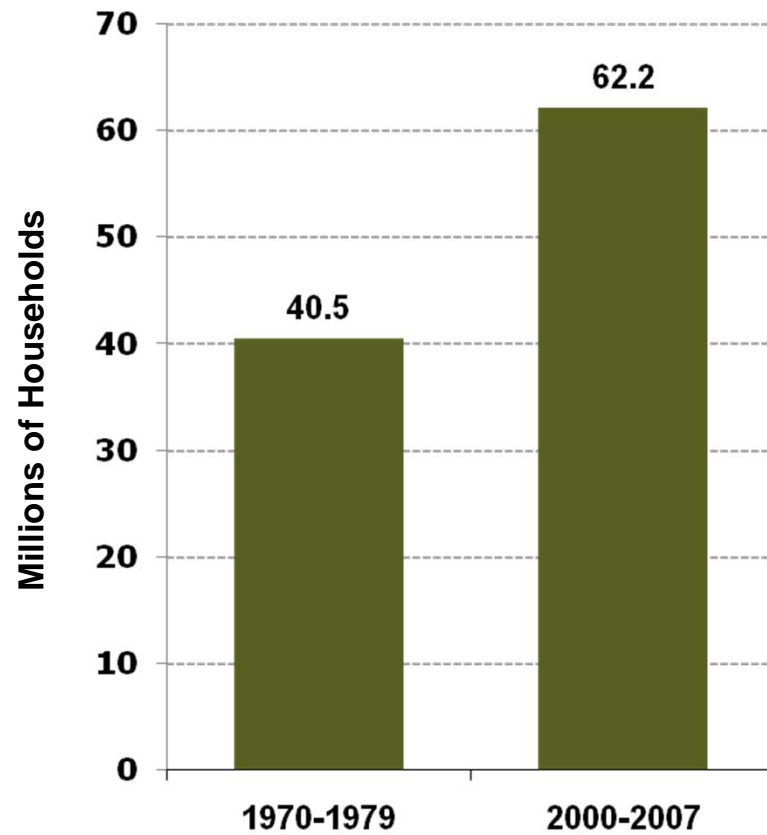


# Residential Natural Gas: Average Consumption vs. Average Number of Customers

### Average Total Natural Gas Residential Consumption



### Average Number of Households Served



# Pipeline Replacements

- Increasing numbers of accelerated replacement programs
- PHMSA data shows leaks decrease with pipe replacements
- EPA data shows emissions decrease with pipe replacement
- Pipe replacements do not generate new customers – thus, no new revenue
- Utilities increasingly using trackers to recover replacement costs



# Traditional Rate Design

- **Philosophy:**
  - Costs recovered based on energy consumption rather than on distribution cost of service
- **Basis:**
  - **Forecast costs** - rather than actual costs
  - **Forecast volumes** – each volumetric unit of natural gas is assigned a pro-rata share of distribution costs
- **Assumptions:**
  - **Inaccurate** - forecast errors (costs and volumes)
  - **Inequitable** – either customer or company loses
  - **Inefficient** – only remedy is frequent rate case



# Service Distinctions

## Service Type:

- Sales (Bundled natural gas sales and distribution service)
- **Transportation (distribution service only)** – sometimes called “choice”. Choice customers have unregulated supply but still have regulated distribution.

## Quality of Service

- Firm
- Interruptible (may be cut-off at utility’s discretion)

## Class of Service

- Residential, commercial, industrial, electric, general service (large or small volume), seasonal

# Varieties of Rate Designs

- **Volumetric:**
  - Typical for LDCs
  - Costs recovered based on the volume of service received by the customer
- **Flat:**
  - Cost recovered based on the number of customers
  - 5 states use
- **Demand:**
  - Cost recovered based on the peak amount of service received over a period of time, e.g., monthly
  - FERC pipelines and Atlanta Gas Light use
- **Mixed:**
  - Aspects of more than one rate design
  - Many LDCs now use

# Cost of Service Study

- A detailed analysis of 3 costs: rate base, expenses, and return
- Rate Base
  - Amount of money in facilities and equipment, reduced by depreciation; base on which return is earned.
- Expenses
  - O&M, depreciation, and taxes
- Return
  - Rate of return established through a cost of capital study and risk analysis - approved by regulator
  - Rate of return x rate base = allowed return

# PGA – The Purchased Gas Adjustment Utilities Earn Money From Service, Not Sales

## Distribution Cost of Service includes:

- Maintain pipe in the ground
- Build new lines
- Employee payrolls
- Hundreds of other costs

## Gas Costs are Passed Through in the PGA

- \$2 for 1 million British Thermal Units (Btu)
- Customer used 10 million Btu
- Customer billed \$20 for period

## Other Gas Costs Also Passed Through in the PGA

- Transmission pipe fee for gas transported to service terr.
- Storage fees

## What is Deregulation?

- Is it federal deregulation of well head natural gas prices? - **Yes**
- Is it restructuring of interstate pipeline capacity markets? - **Maybe**
- Is it the ability of end-use gas customers to choose between a marketer and the utility for its gas supply? – **Yes**
- Is it the ability to pay a deregulated price for local distribution service? – **NO!**

# Deregulation Customers and Volumes

- Deregulation at the local level is the ability of customers to choose between an unregulated marketer and the regulated utility for their gas supply
  - 58% of all volumes are deregulated
- 91% of electric volumes and 72% of electric customers are deregulated
- 81% of industrial volumes and 32% of industrial customers are deregulated
- 41% of commercial volumes and 12% of commercial customers are deregulated

# Approval by the States

- The ability to buy supplies of gas from someone other than the local utility is nearly universal in the commercial, industrial, and electric generation customer classes
- 48 states and DC allow sales to commercial customers
- 49 states allow sales to industrial customers
- 47 states allow sales to electric customers



# Residential Customer Choice Customers and Volumes

- 21 states and the District of Columbia allow residential customers to choose between an unregulated marketer and the regulated utility for their gas supply
- These programs are frequently called customer choice, and the number of states offering them has not changed since 2003.
- Choice is available to approximately 55% of all residential customers and to 50% of all residential volumes
- Only 8% of residential customers choose a deregulated supplier.

# States with the Most Residential Choice Customers and Volumes

- 50% of choice volumes are purchased in Georgia and Ohio
  - AGL has exited the merchant function
  - East Ohio Gas has exited the merchant function
- 80% of choice volumes are purchased in 4 states: GA, OH, IL, and NY

## Amount of Natural Gas Sold In 2009 by Class of Service, Differentiated by Contract Type

Customer Class	Sales Vols. (Tcf)	Transp. Vols. (Tcf)	Total Vols. (Tcf)	% of total volumes using transp.	% of total volumes w/transp. available
• Residential	4.26	0.52	4.78	11%	50%
• Commercial	1.84	1.27	3.12	41%	
• Industrial	1.16	5.01	6.17	81%	
• Electric	0.54	5.60	6.14	91%	
• Vehicle	0.018	0.001	0.020	5%	
• Total	7.82	12.41	21.22	58%	

Customer Class	Total Custs.	Choice Custs.	% of customers using transp.	% of customers with transport. Available
• Residential	65 million	5.1 million	8%	55%
• Commercial			12%	
• Industrial			32%	
• Electric			72%	
• Vehicle			5%	

# Innovative Rate Design: Non-volumetric Rates and Cost Trackers

**Non-volumetric – distribution revenues are assigned per customer or on some other basis that is not tied to volumes of energy consumed**

- **48 million residential customers** in 38 states currently served under non-volumetric rates such as rate stabilization, revenue decoupling, SFV, etc.

**Tracked costs – rate is based on actual costs rather than estimated and forecast costs**

- **Vast majority of residential customers served by trackers**
  - **All** states use a PGA
  - **Numerous** additional trackers

# What Are Tracking Mechanisms (Adjustment Clauses) and Why Are They Used?

- Trackers are **approved in rate cases** for specific future events, durations, and amounts
- Two types: cost trackers and revenue trackers
- Trackers allow utilities to recover or rebate between rate cases the adjustments **prospectively approved in the rate case**
- Expedited rate cases provide benefits to customers and companies
  - No over/under recoveries
  - Expensive, time-consuming cases are avoided
- Not single issue ratemaking

# Decoupling Calculation

## Representative Example – Average Usage

**\$300,000,000 Annual Cost of Service**  
**1,000,000 Residential Customers**  
**100 Mcf per customer per year**

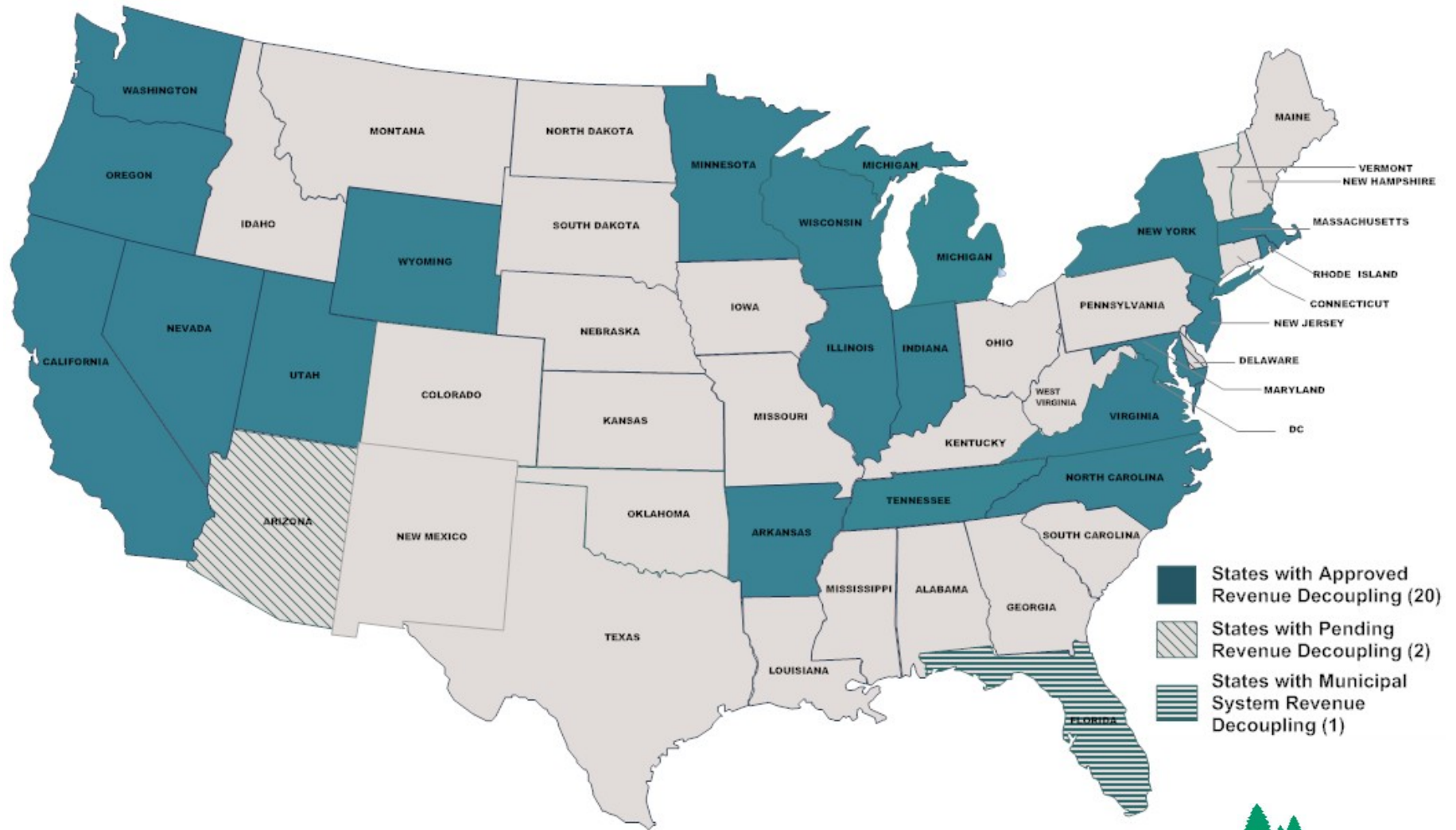
### Per Mcf (Volumetric)

- 100,000,000 Mcf/yr - Total System Throughput
- \$3 Distribution Charge/Mcf

### Per Customer (Non-volumetric)

- 1,000,000 Residential Customers
- \$300 Distribution Charge/customer

# States with Natural Gas Revenue Decoupling As of July 2011





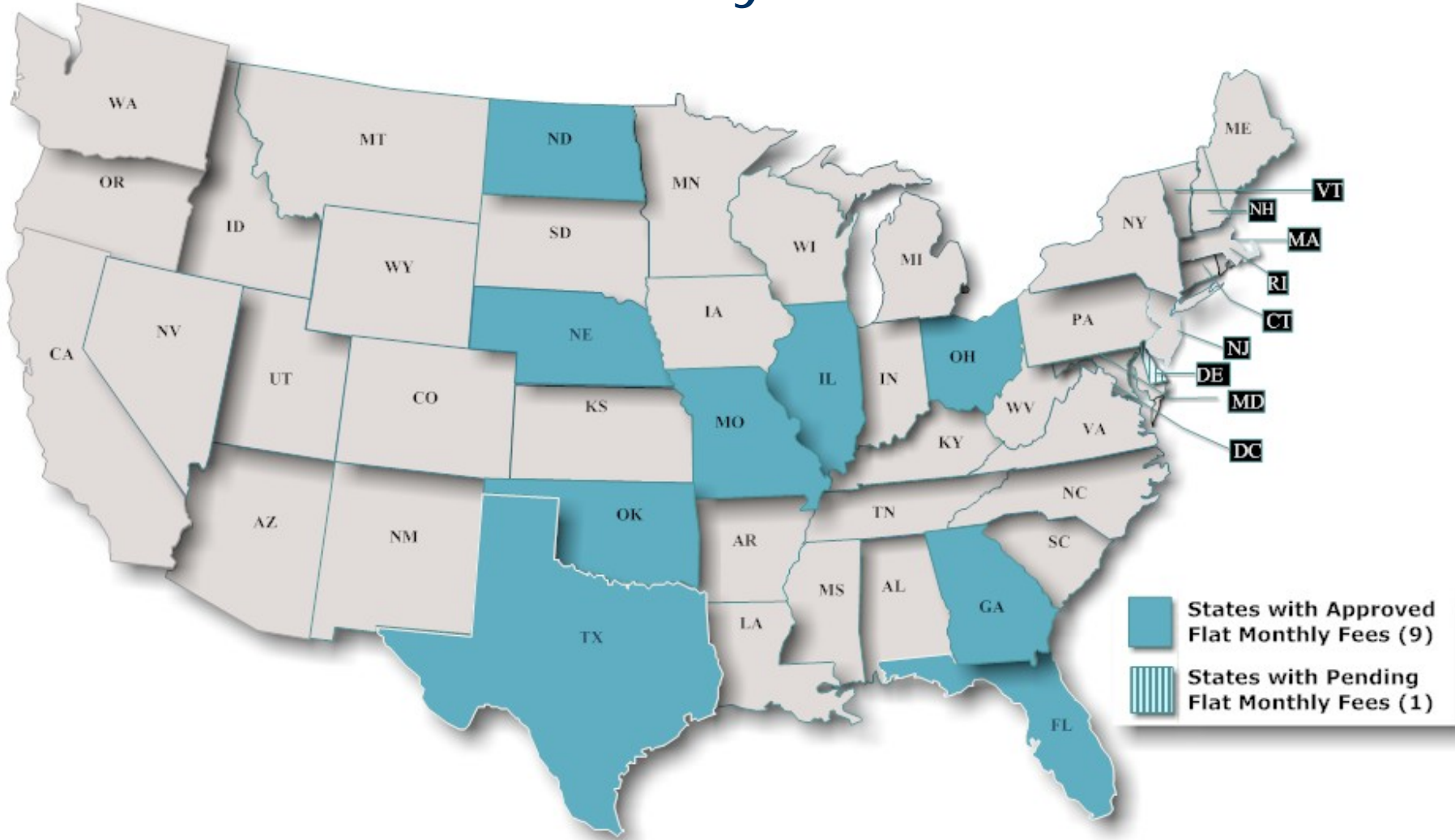
# Decoupling Tariffs as of July 2011

**APPROVED – 47 Companies, 20 States, 29 Million Res. Customers\***

1. AR – Arkansas Oklahoma
2. AR – Arkansas Western
3. AR – CenterPoint Energy
4. CA – Pacific Gas and Electric
5. CA - San Diego Gas and Electric
6. CA – Southern California Gas
7. CA – Southwest Gas
8. IL – Integrys Peoples Gas
9. IL – Integrys North Shore Gas
10. IN – Citizens Energy Group
11. IN – Vectren North Indiana Gas
12. IN – Vectren South SIGECO
13. MA – Columbia Massachusetts
14. MA – Fitchburg Gas and Electric
15. MA – National Grid Massachusetts
16. MA – New England Gas
17. MD – Baltimore Gas and Elec.
18. MD – Washington Gas
19. MI – Consumers Energy
20. MI - Michigan Consolidated Gas
21. MI – Integrys Michigan Gas Utilities
22. MN – CenterPoint Minnesota Gas
23. NC - Piedmont Natural Gas
24. NC – Public Service Co. of North Carolina
25. NJ – New Jersey Natural Gas
26. NJ – South Jersey Gas
27. NV – Southwest Gas
28. NY – Central Hudson Gas and Electric
29. NY – Consolidated Edison
30. NY – National Fuel Gas Distribution
31. NY – National Grid Long Island
32. NY - National Grid Niagara Mohawk
33. NY – National Grid NYC
34. NY – Orange and Rockland Utilities
35. NY – Rochester Gas and Electric
36. OR – Cascade Natural Gas
37. OR – NW Natural Gas
38. RI – National Grid Narragansett
39. TN – Chattanooga Gas
40. UT – Questar Gas
41. VA – Columbia Virginia
42. VA – Virginia Natural Gas
43. WA – Avista Corp.
44. WA – Cascade Natural Gas
45. WI – Integrys Wisconsin Public Service Co.
46. WY – Questar Gas
47. WY – Source Gas

**\* Of 65 Million (2008) US Residential Customers**

# States with Flat Monthly Fee Rate Designs As of July 2011



# Flat Monthly Fee Rate Design (SFV) as of July 2011

## Approved – 15 Companies, 9 States, 9 Million Res. Customers\*

1. FL – TECO Peoples Gas – Three-tier monthly charge plus small variable charge
2. GA – Atlanta Gas Light – Individually determined monthly demand charge (Straight Fixed Variable)
3. IL – Nicor Gas – Flat fee plus a small variable charge
4. MO – Atmos Energy – Flat fee plus a small variable charge; 75% of costs recovered in monthly fee
5. MO – Empire District Gas
6. MO – Laclede Gas – Modified rate blocks
7. MO – Missouri Gas Energy - Flat monthly fee - \$28 residential/\$39.26 small general service
8. NE – SourceGas – Modified rate blocks
9. ND – Xcel Energy – \$18.48 flat monthly fee
10. OH – Columbia Ohio – Flat fee
11. OH – Dominion East Ohio – Flat fee plus small variable charge
12. OH – Duke Energy – Flat fee
13. OH – Vectren Ohio - \$18.37 flat monthly fee
14. OK – Oklahoma Natural Gas – Two-tier plan – Offers customers a choice
15. TX – Texas Gas Service El Paso – \$10.80 flat fee up to 200 ccf/month

## Pending – 4 Companies, 1 State, 1 Million Res. Customers\*

1. DE – Delmarva Power and Light
2. IL – Integrys North Shore Gas
3. IL – Integrys Peoples Gas Light and Coke
4. NE - Black Hills – Two-tier, declining block rate

# Flat Monthly Fee (FMF) Calculation Average Usage

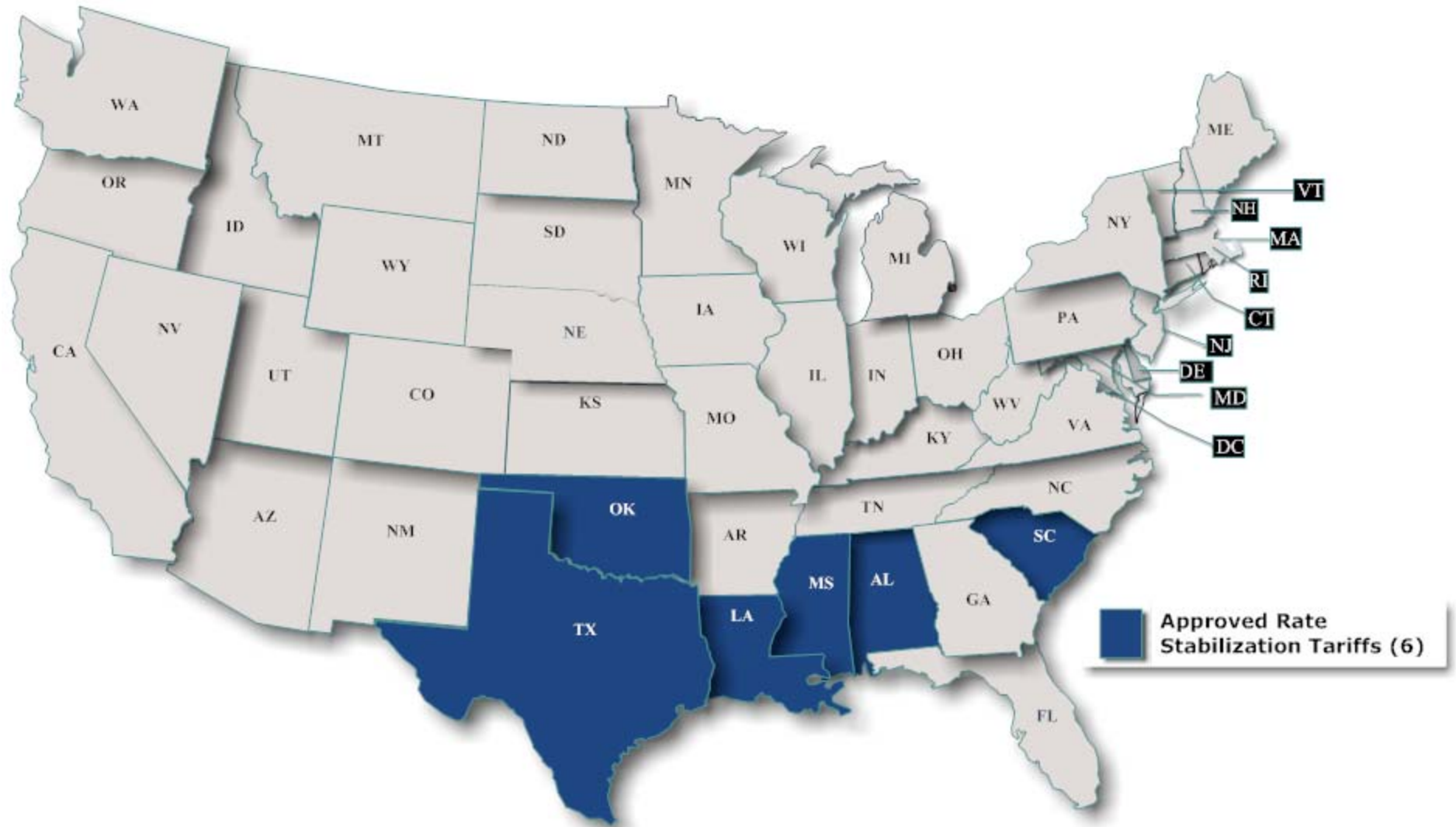
## FMF Rate Design

- 100 Mcf/year
- \$300 Distribution Charge/year
- \$300/12 months
- \$25 Distribution Charge/month

## FMF with 5% volume reduction

- 95 Mcf/year
- \$300 Distribution Charge/year
- \$300/12 months
- \$25 Distribution Charge/month  
*regardless of Mcf consumed*

# States with Rate Stabilization Tariffs as of July 2011



# Rate Stabilization Tariffs as of July 2011

**Approved – 13 Companies, 6 States, 6 Million Res. Customers\***

1. AL – Alabama Gas
2. AL – Mobile Gas
3. LA – Atmos Energy
4. LA – CenterPoint Energy
5. LA – Entergy
6. MS – Atmos Energy
7. MS – CenterPoint Energy
8. OK – CenterPoint Energy
9. OK – Oklahoma Natural Gas
10. SC – Piedmont Natural Gas
11. SC – South Carolina Electric and Gas
12. TX – CenterPoint Energy
13. TX – Atmos Energy

**\* Of 65 Million (2008) US Residential Customers**

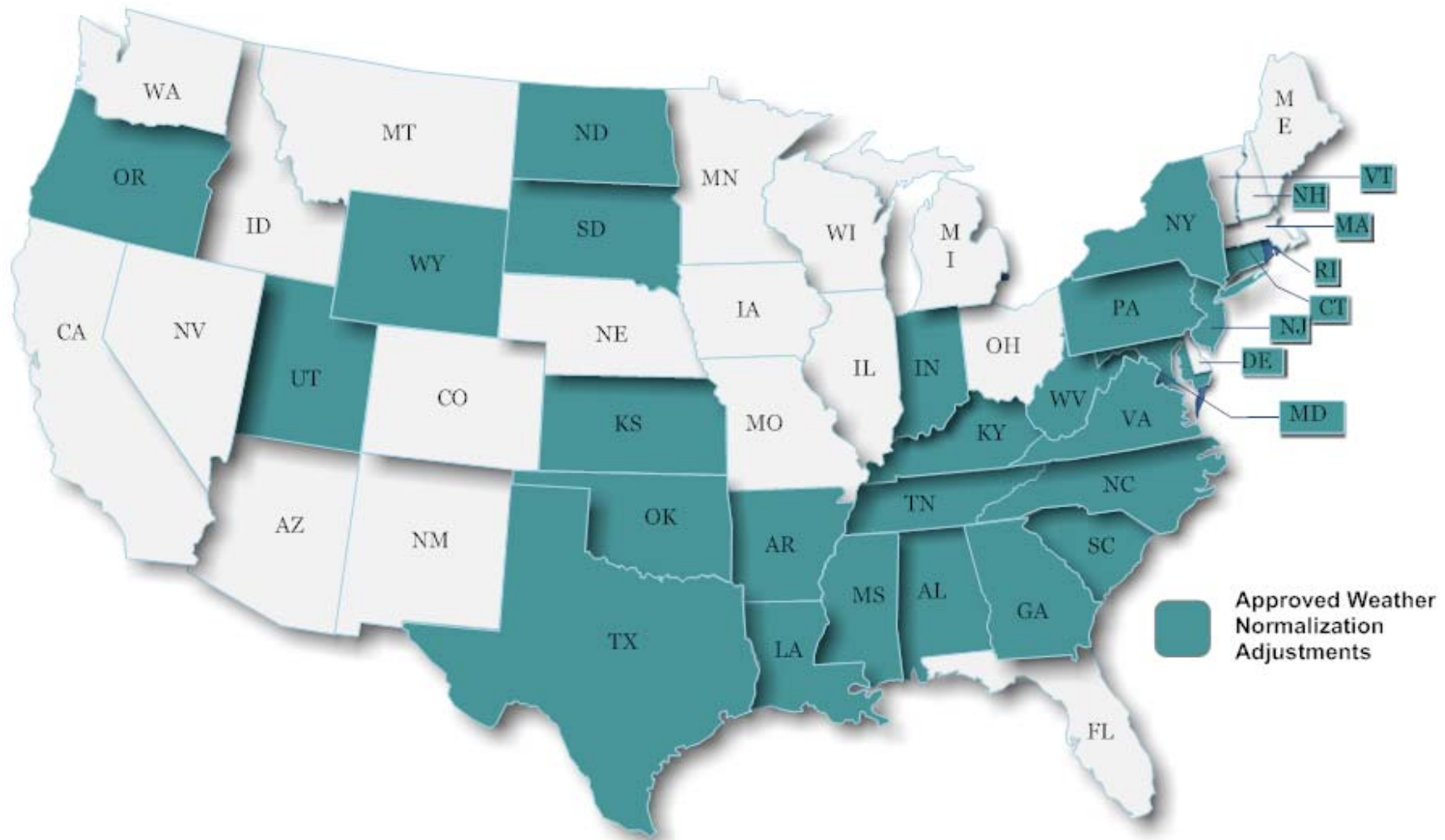
# Rate Stabilization (RS) Mechanism

- Decouples utility rates from natural gas throughput by adjusting rates to meet pre-established and authorized rate targets
- Regulatory review utilizes an expedited revenue study, as well as an expedited cost study
- NOT incentive regulation -- no reward for meeting performance targets
- Expedites utility infrastructure investment between rate cases
- Symmetrical - shares efficiency savings with customers
- FERC-regulated electric transmission companies use RS

***Streamlines ratemaking process and costs of utility regulation***



# States with Weather Normalization Adjustments 25 Approved as of July 2011



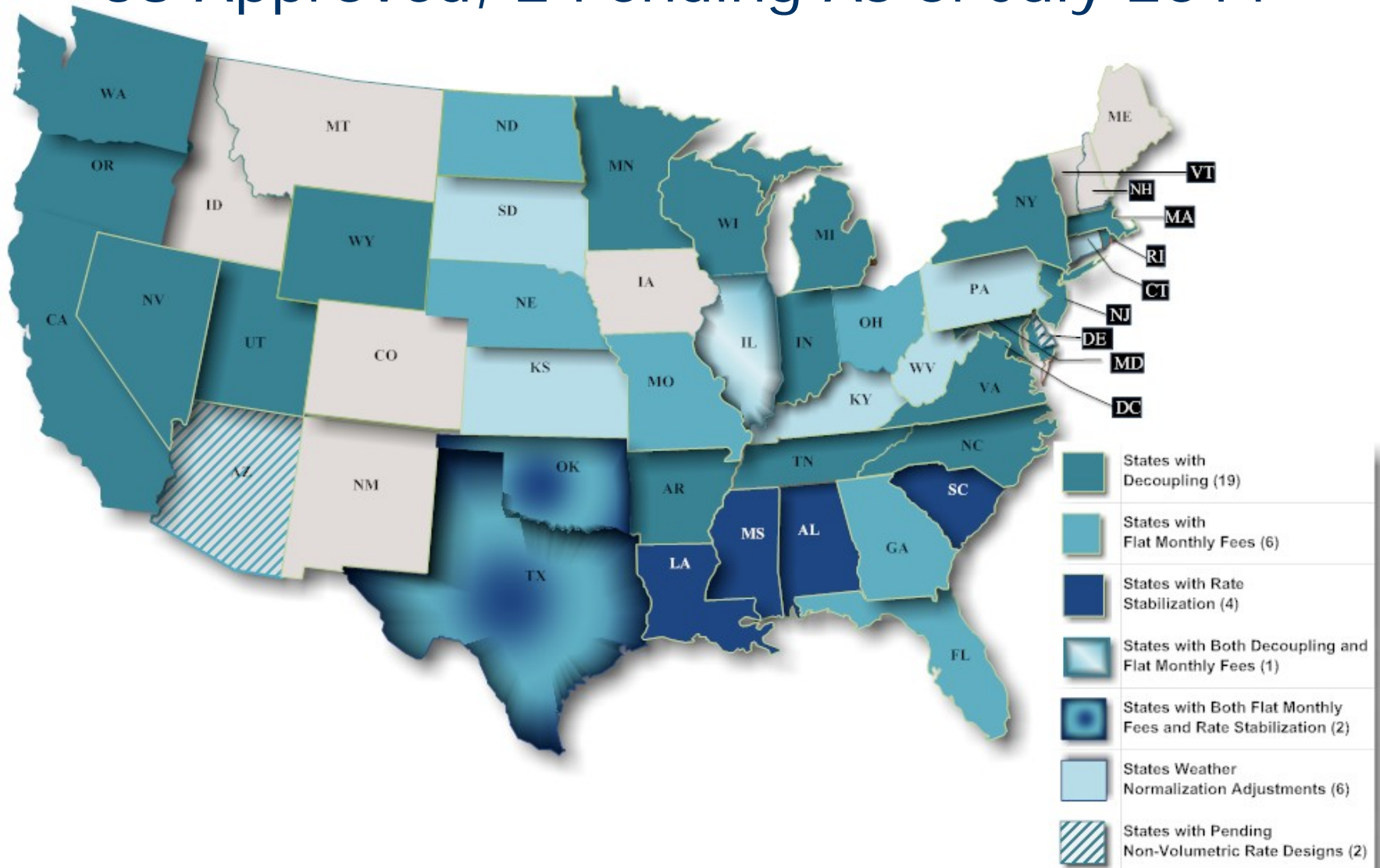
# Weather Normalization Adjustment Clauses as of July 2011

**Approved - 54 Companies, 25 States, 16 Million Res. US Customers;  
4 Million Res. Customers at US Companies w/o Decoupling or RS**

1. AB – Atco Gas
2. AL - Alabama Gas
3. AL – Mobile Gas
4. AR – Arkansas Western
5. AR - CenterPoint Energy
6. BC – Terasen Gas
7. CT - Southern Connecticut Gas
8. GA - Atmos Energy
9. IN – Vectren North Indiana Gas
10. IN – Vectren South SIGECO
11. KS - Atmos Energy
12. KS – Black Hills
13. KS – Kansas Gas Service
14. KY - Atmos Energy
15. KY - Columbia Kentucky
16. KY - Delta Natural Gas
17. KY - Louisville Gas and Electric
18. LA – Atmos - Louisiana Gas Service
19. LA - Atmos - Trans Louisiana
20. MD - Chesapeake Utilities
21. MD - Columbia Maryland
22. MS - Atmos Energy
23. ND – Montana-Dakota Utilities
24. NJ – Elizabethtown Gas
25. NJ – Public Service Electric and Gas
26. NY - Consolidated Edison
27. NY – National Grid NYC
28. - NY – National Grid Long Island
29. - NY – National Grid Niagara Mohawk
30. - NY - National Fuel Gas Distribution
31. - NY – New York State Electric and Gas
32. - NY - Orange & Rockland Utilities
33. - NY - Rochester Gas & Electric
34. - OK - CenterPoint Energy
35. - OK – Oklahoma Natural Gas
36. - OR - NW Natural
37. - PA - Philadelphia Gas Works
38. - QB - Gaz Metro
39. - RI - National Grid Narragansett Gas
40. - SC - Piedmont Natural Gas
41. - SC - South Carolina Electric & Gas
42. - SD – Montana-Dakota Utilities
43. - TN – Atmos Energy
44. - TN - Chattanooga Gas
45. - TN - Piedmont Natural Gas
46. - TX - Atmos Energy
47. - TX - Texas Gas Service
48. - UT – Questar Gas
49. - VA – Atmos Energy
50. - VA – City of Richmond Dept. Pub. Utils
51. - VA - Roanoke Natural Gas
52. - VA - Southwestern Virginia Gas
53. - WV – West Virginia Utilities
54. - WY – Questar Gas

# States with Non-Volumetric Rates and WNA

## 38 Approved, 2 Pending As of July 2011



# States with WNA and Non-Volumetric Rate Designs for Natural Gas as of July 2011

Approved - 111 Companies, 38 States, 48 Million Res. Customers

## ***STATES WITH DECOUPLING***

1. Arkansas
2. California
3. Colorado
4. Indiana
5. Massachusetts
6. Maryland
7. Michigan
8. Minnesota
9. New Jersey
10. Nevada
11. New York
12. North Carolina
13. Oregon
14. Tennessee
15. Utah
16. Virginia
17. Washington
18. Wisconsin
19. Wyoming

## ***STATES WITH FLAT MONTHLY FEES***

1. Florida
2. Georgia
3. Missouri
4. Nebraska
5. North Dakota
6. Ohio

## ***STATES WITH RATE STABILIZATION***

1. Alabama
2. Mississippi
3. Louisiana
4. South Carolina

## ***STATES WITH BOTH DECOUPLING AND FLAT MONTHLY FEES***

1. Illinois

## ***STATES WITH BOTH FLAT MONTHLY FEES AND RATE STABILIZATION***

1. Oklahoma
2. Texas

## ***STATES WITH WNA AND WITHOUT OTHER TYPES***

1. Connecticut
2. Delaware
3. Kansas
4. Kentucky
5. South Dakota
6. West Virginia

# Infrastructure Investment Cost Recovery Issues

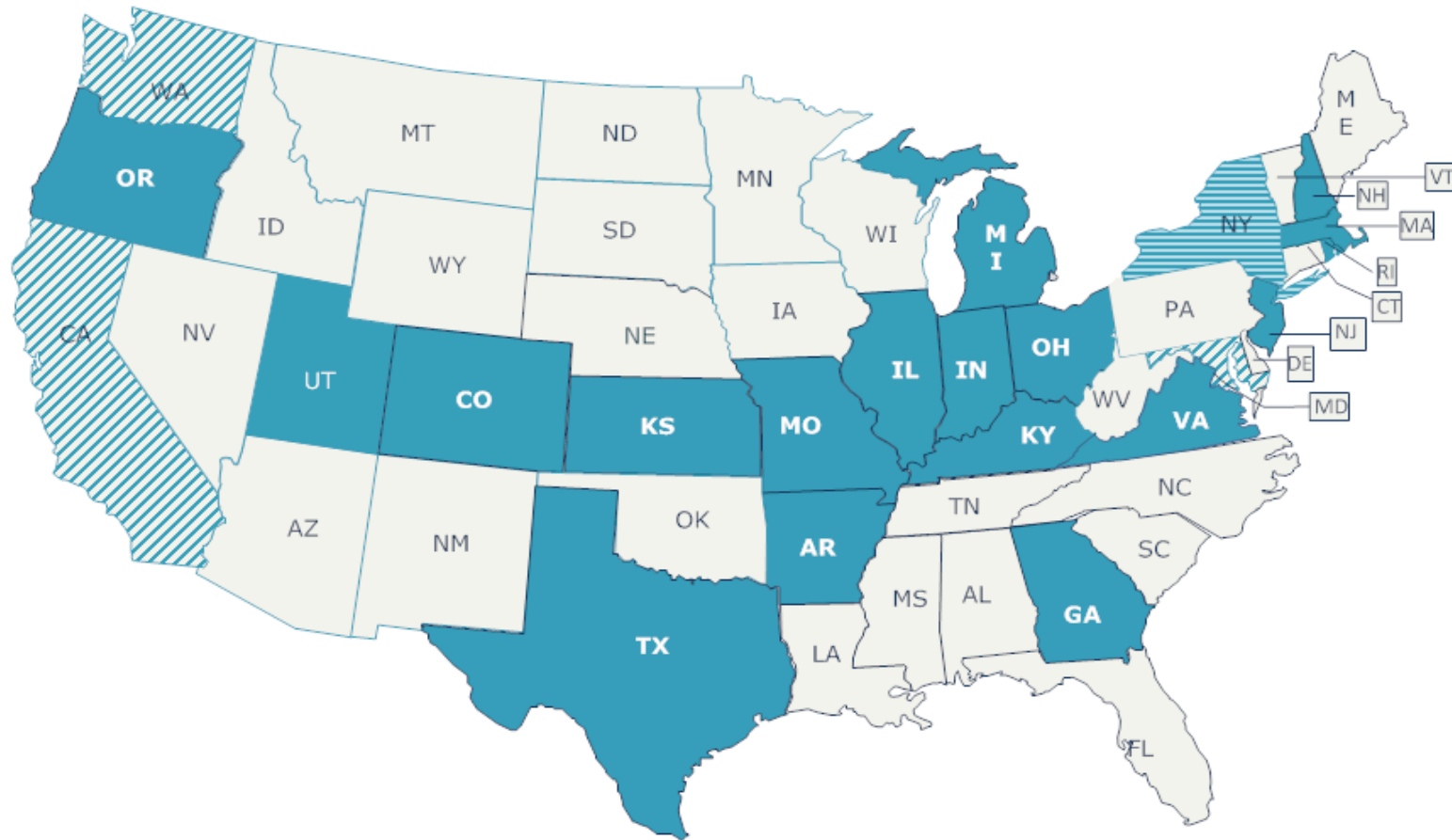
- States encouraging utilities to maximize safety and reliability investments
- Federal Pipeline Safety Act of 2002 requires increased maintenance and safety investments
- Rate Lag – Traditional rates do not recover costs until after investment made, sometimes several years
- Rate Shock – large investments over short periods




# Advantages of Innovative Rates and Cost Trackers for Infrastructure Cost Recovery

- Investments to ensure system safety and upgrade delivery reliability are made on an timely basis
- Timely cost recovery for utilities
  - Leads to utility financial stability and reduced capital costs
- Expensive rate cases, whose costs are recovered from customers, are avoided
- Moderate bill impacts for customers
  - Cost recovery over several years and small adjustments to rates avoids customer rate shock



# States With Infrastructure Cost Recovery Mechanisms as of July 2011



-  States with Full Infrastructure Cost Recovery Mechanisms (18)
-  States with Limited Infrastructure Cost Recovery Mechanisms (1)
-  States with Pending Infrastructure Cost Recovery Mechanisms (3)



# Infrastructure Cost Recovery Mechanisms as of July 2011

*19 Million Residential Customers - Of 65 Million Customers in  
U.S.*

## **FULL - 18 States**

1. AR – CenterPoint Energy
2. CO – Public Service Co. of Colorado
3. GA – Atlanta Gas Light
4. GA – Atmos Energy
5. IL– Integrys Peoples Gas
6. IN – Vectren North Indiana Gas
7. IN – Vectren South SIGECO
8. KS – Atmos Energy
9. KS – Black Hills
10. KS – Kansas Gas Service
11. KY – Atmos Energy
12. KY – Columbia Kentucky
13. KY – Delta Natural Gas
14. KY – Duke Energy Kentucky
15. MA – Columbia Massachusetts
16. MA – National Grid Massachusetts
17. MA – New England Gas
18. MI – SEMCO Energy
19. MO – Ameren Missouri
20. MO – Atmos Energy
21. MO – Laclede Gas
22. MO – Missouri Gas Energy
23. NH – National Grid EnergyNorth
24. NJ – New Jersey Natural
25. NJ – Elizabethtown Gas
26. NJ – Public Service Electric and Gas
27. NJ – South Jersey Gas
28. OH – Columbia Ohio
29. OH – Dominion East Ohio
30. OH – Duke Energy
31. OH – Vectren Ohio
32. OR – Avista Corp.
33. OR – NW Natural
34. RI – National Grid Narragansett Gas
35. TX – Atmos Energy
36. TX – CenterPoint Energy
37. TX – Texas Gas Service
38. TX – All Natural Gas Utilities
39. UT – Questar Gas
40. VA – All Natural Gas Utilities May Apply

# – Limited and Pending – Infrastructure Cost Recovery Mechanisms as of July 2011

*Of 65 Million Customers in U.S.*

## **LIMITED - 1 State**

1. NY – Corning Natural Gas
2. NY – National Grid NYC
3. NY – National Grid Long Island
4. NY – National Grid Niagara Mohawk

*2 Million Residential Customers*

## **PENDING – 4 Additional States**

1. CA – Southern California Gas
2. CA – San Diego Gas and Electric
3. MA – Fitchburg Gas and Electric
4. MD – Washington Gas
5. ME – Northern Utilities
6. NH – Northern Utilities
7. VA – Washington Gas
8. WA – Puget Sound Energy

*8 Million Residential Customers*

# Revenue Tracker Summary as of July 2011

## Revenue Decoupling

- 20 states, 47 companies, 29 million residential customers

## Rate Stabilization Tariffs

- 6 states, 13 companies, 6 million customers

## Weather Normalization (Partial Decoupling)

- 25 states and Canada, 54 companies (and 1 pending), 16 million US residential customers

## All Revenue Trackers

- 97 companies, 34 states and Canada, 39 million US residential customers

**\* Of 65 Million (2008) US Residential Customers**

# Cost Tracker Summary as of July 2011

## **Gas Cost Tracker (PGA)**

- All states

## **Lost and Unaccounted For Tracker (LUAF)**

- 47 States (excluding MI, MT, SD)

## **Bad Debt Cost Tracker**

- 24 states plus DC and Canada, 59 companies, 24 million US customers; pending 4 companies, 1 million customers

## **Infrastructure Investment Cost Tracker**

- 19 states (18 full, 1 limited), 40 utilities plus all in Texas, 21 million customers; pending 8 companies, 8 million customers

## **Pension Trackers**

- 14 states plus DC, 25 companies, 16 million customers; pending 2 companies, 2 million customers



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