

# APGA Update

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At the Kentucky Gas Association Annual Meeting, French Lick, IN June 14, 2018



**American Public Gas Association**

# American Public Gas Association

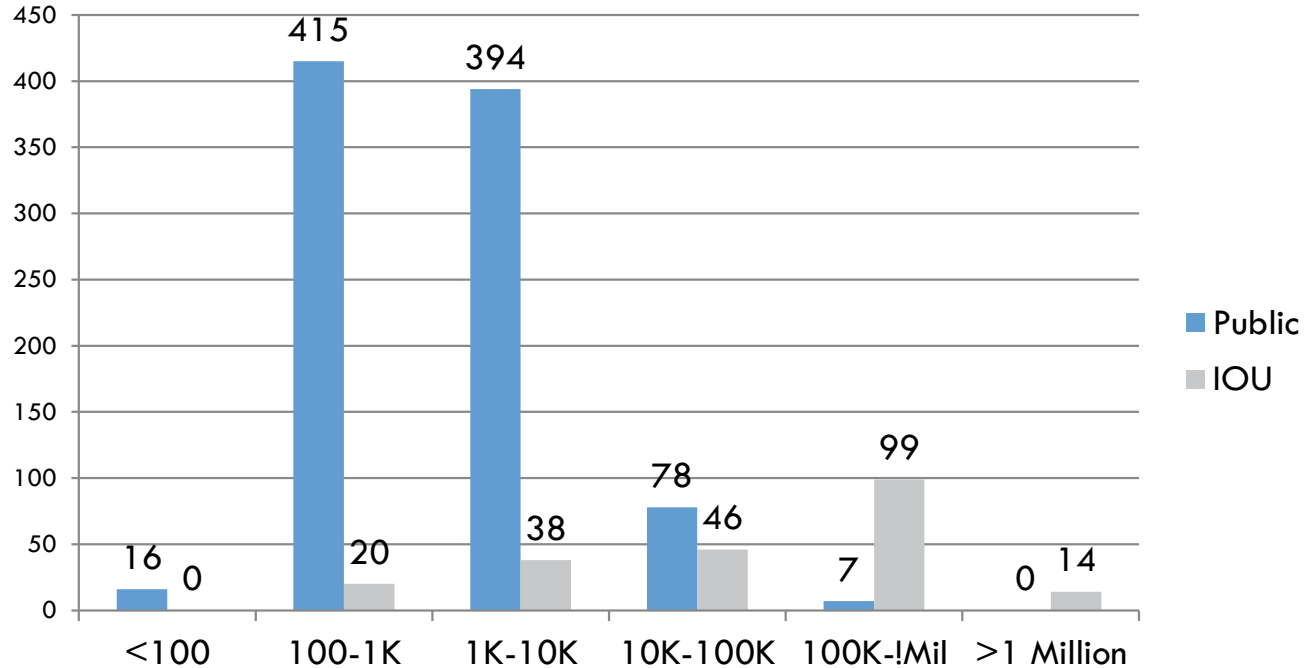
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- ~1000 community-owned gas systems
- Over 700 are APGA members
  - 37 states
  - Serving ~5 Million Customers
  - ~21,000 Employees
  - Operating ~120,000 Miles of Main
- Systems size: 19 to ~500,000 meters
- Largest: Philadelphia with ~ 500,000 meters
- Smallest: Wagner County, OK with 19 meters

# US Gas Distribution Industry

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Most utilities regulated by PHMSA have fewer than 10,000 customers



Source: PHMSA Form 7100.1-1, 2016 Data

# What I'll Cover

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- ▣ Gas Overall Awareness Level (GOAL)
- ▣ Pipeline Safety Management Systems (PSMS) for Public Gas
- ▣ System Operational Achievement Recognition (SOAR)
- ▣ Benchmarking
- ▣ SIF Programs:
  - SHRIMP
  - Other plan tools
  - Training video series (New)

# But first, a regulatory update

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- New regulations promulgated in the past year:
  - ▣ Calculate percent unaccounted for gas as a percent of gas delivered rather than gas received
  - ▣ Report negative UAF rather than zero if the result of the calculation is less than zero

# Gas Overall Awareness Level (GOAL)

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- Began in 2006 to address new public awareness effectiveness assessment requirements
- Interactive Voice Response Speech Recognition (IVRSR)
- Statistical sample of customers and non-customers living near distribution lines
- 175 systems using GOAL
- 5 GOAL users in Kentucky

# Surveys Required

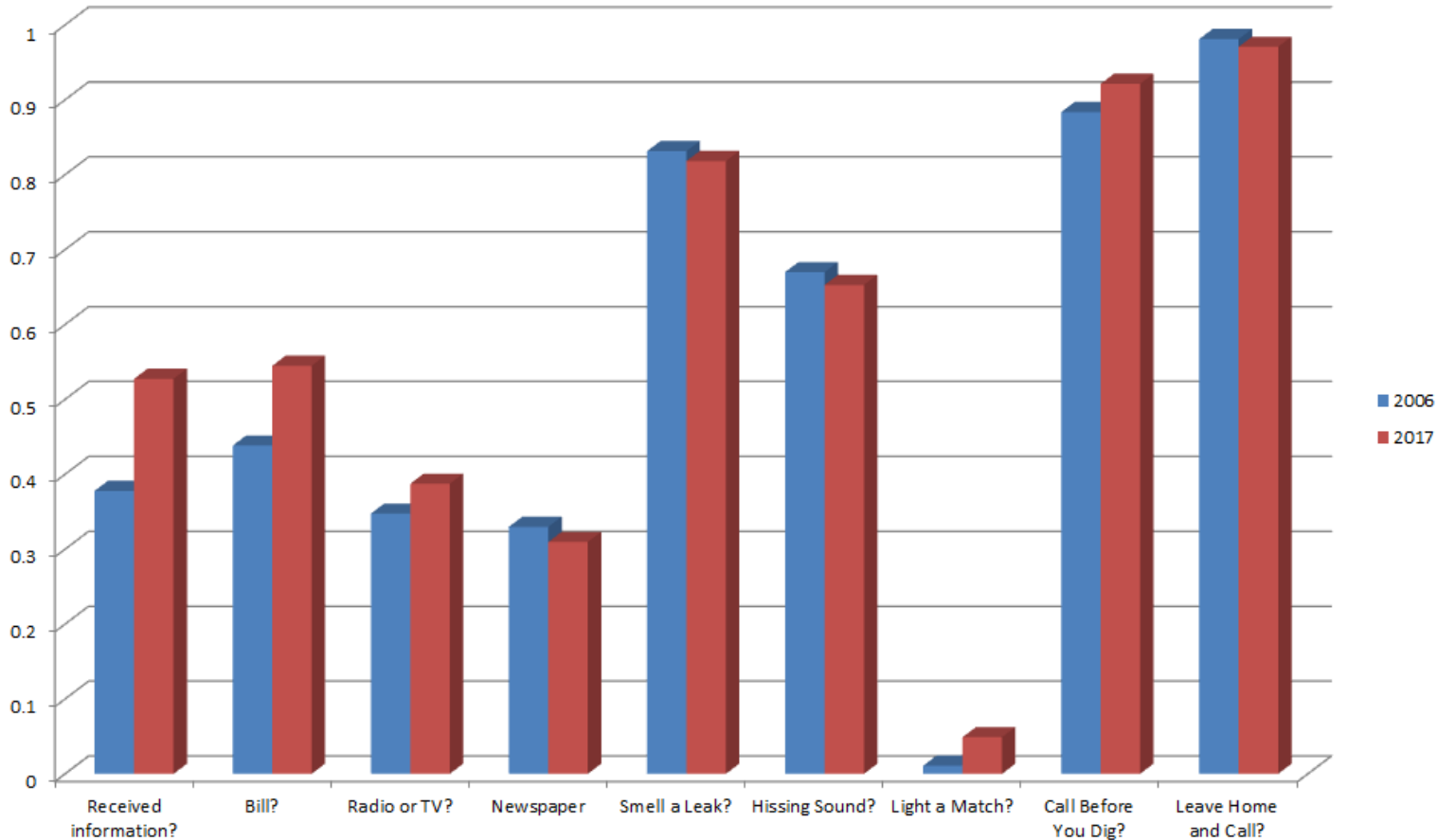
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- **Interviews Desired =  $2500 * N / ((E^2 * N / 1.96) + 2500)$**

# of customers	5% error	Sample required	With non-customers
500	217	500	1000
1000	277	1000	2000
5000	357	5000	10000
10000	370	7396	14792
20000	377	7535	15071
50000	381	7621	15243
100000	383	7651	15301
500000	384	7674	15348
1000000	384	7677	15354

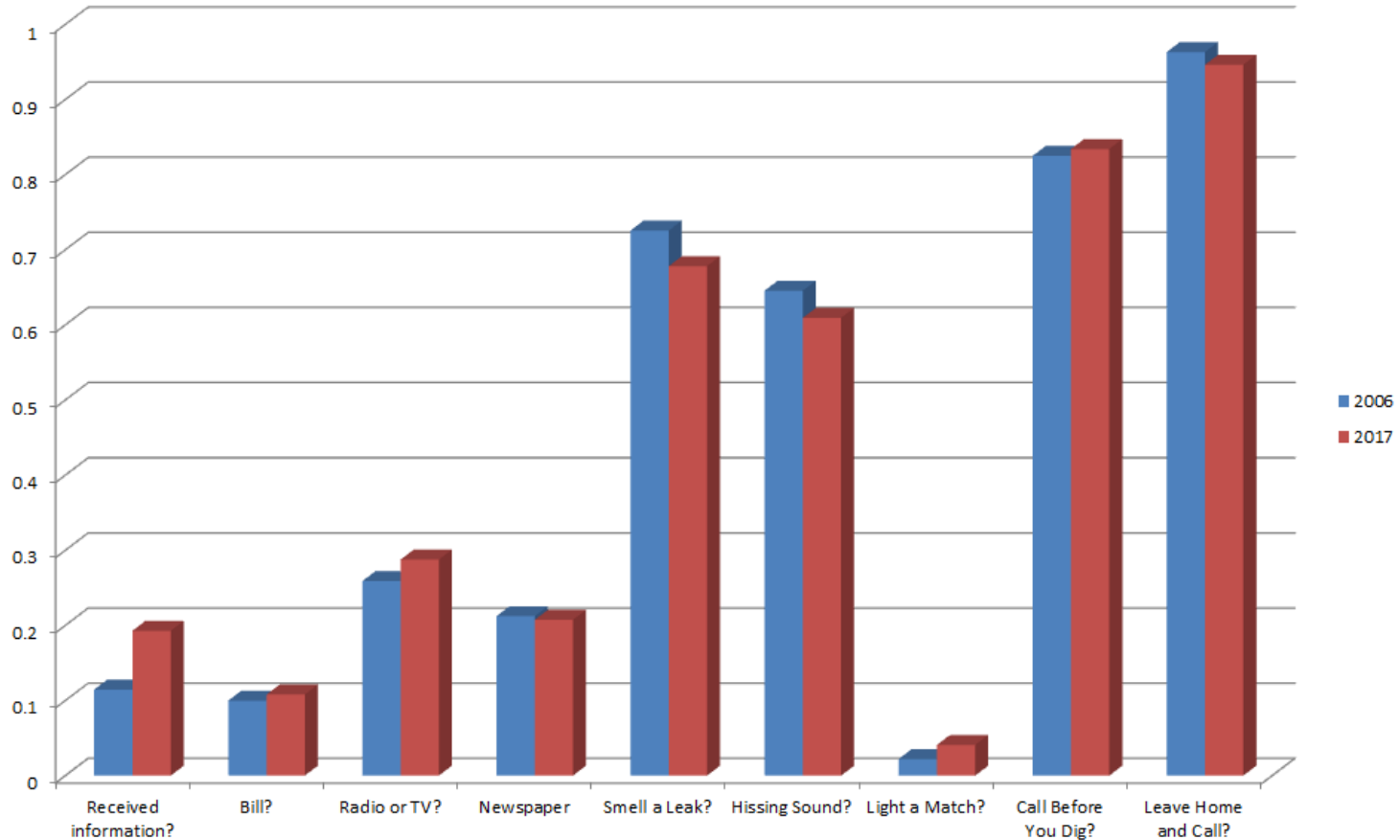
# GOAL Results, Customers 2006-2017

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# GOAL Results, Non Customers 2006-2017



# Pipeline Safety Management Systems

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- ❑ Result of an NTSB investigation of a hazardous liquid accident
- ❑ APGA supports effective safety management systems for public gas systems
- ❑ All ten elements in RP 1173 are applicable for public gas, however
- ❑ RP 1173 is geared toward managing safety in large pipeline operations with thousands of widely dispersed employees
- ❑ It is written in language most distribution system managers would find foreign
- ❑ It would be difficult, if not impossible for most public gas systems to adopt RP 1173

# Enforcing RP 1173

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- ❑ The word “shall” appears 216 times in RP 1173
- ❑ PHMSA is developing a form for auditing compliance with RP 1173, even though RP 1173 is strictly voluntary
- ❑ The draft PSMS inspection form is 150 pages long!
- ❑ PHMSA is asking states to audit distribution system adoption of RP 1173

# PSMS Elements

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1. Leadership and Management Commitment
2. Stakeholder Engagement
3. Risk Management
4. Operational Controls
5. Incident Investigation, Evaluation, and Lessons Learned

# PSMS Elements (continued)

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6. Safety Assurance
7. Management Review and Improvement
8. Emergency Preparedness and Response
9. Competence, Awareness, and Training
10. Documentation and Record Keeping

# PSMS Elements

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1. Leadership and Management Commitment
2. Stakeholder Engagement (Public Awareness)
3. Risk Management (DIMP)
4. Operational Controls (O&M Manual)
5. Incident Investigation, Evaluation, and Lessons Learned (O&M/Emergency Manual)

# PSMS Elements (continued)

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6. Safety Assurance
7. Management Review and Improvement
8. Emergency Preparedness and Response (Emergency Manual)
9. Competence, Awareness, and Training (OQ plan)
10. Documentation and Record Keeping (Various plans)

# “Shalls” are the issue

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## 10.2.2 Audits

“The pipeline operator shall perform audits to examine its conformity with this RP and the implementation of its PSMS.”

“An audit may be performed by external professionals or internal personnel not involved in the work of the PSMS or the operations being audited. Examples may include personnel of a separate operating unit, an organization's compliance unit, an organization's internal audit group, or external parties such as professional auditors, subject matter experts, or peer operators.”



# APGA PSMS Guidance

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- APGA is developing guidance for public gas SMS
- Guidance will follow the ten RP 1173 elements, modifying or eliminating “shall” statements that aren’t applicable or necessary for public gas utility safety
- For example, management at a public gas system is very different from management of an investor-owned utility

# Safety Culture

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- Leadership and fostering a safety culture is central to the success of PSMS
- Some elements of safety culture:
  - ▣ Support at all levels
  - ▣ Non-punitive reporting of safety issues
  - ▣ Authority to shut down jobs that are unsafe

# Top Management (utility's governing body)

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## **What can I do to promote a safety culture?**

- ❑ Adequate budget to safely operate and maintain the utility
- ❑ Periodically review with utility managers the capital improvement needs of the utility;
- ❑ Periodically review with utility managers the safety record of the utility and the status of any safety-related improvement projects;
- ❑ Encourage utility managers and employees to come to you with any and all safety concerns; and
- ❑ Provide feedback to employees who raise safety issues

# Management (utility's supervisor)

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## What can I do to promote a safety culture?

- ❑ Establish and maintain policies, goals, and objectives that promote a positive safety culture;
- ❑ Identify and allocate resources sufficient for safe, reliable and efficient operations;
- ❑ Establish performance goals that include safety measures;
- ❑ Review the utility's safety record and performance goals in all management meetings;
- ❑ Communicate your commitment to safety to internal and external stakeholders;

# All utility employees

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## **What can I do to promote a safety culture?**

- ❑ Follow the procedures set forth by the utility;
- ❑ Talk to your supervisor about where procedures can be improved to improve safety;
- ❑ Bring to the attention of supervisors any and all safety concerns, and
- ❑ Always protect the safety of customers, the public and fellow employees during both routine and emergency situations.



- SOAR = **S**ystem **O**perations **A**chievement  
**R**ecognition
- Give recognition to those APGA members that have demonstrated a culture of operational excellence
- Every APGA member can earn the recognition, if they meet the criteria

# Four areas of review

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- Operational excellence is measured in 4 areas:
  - ▣ System Integrity
  - ▣ Employee Safety
  - ▣ Workforce Development
  - ▣ System Improvement



## APGA System Operational Achievement Recognition - Employee Safety

**1. Does your utility have a written employee safety manual and/or employee safety procedures?**

Yes

No

**5. Does the safety manual or program address the following safety issues (check all that apply)**

A statement of safety commitment from management that the manual is to be followed for all work practices

Properties and hazards of Natural Gas

Odorant Safety

Fire safety/Use of fire extinguishers

Head Protection

Eye and Face Protection



# WINNERS

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- Recognition will be granted at three levels of accomplishment:
  - ▣ Bronze (80-89%),
  - ▣ Silver (90-96%) or
  - ▣ Gold (>97%) level achievers.
- We trust the applicant to answer questions honestly rather than require submission of every document

# WINNERS

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## □ **Gold**

- Chambersburg Gas Department, PA
- Paris Henry County Public Utility District, TN
- Rocky Mount Public Utilities, NC
- City of Tallahassee Gas Department, FL

# Silver

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- Chester County Natural Gas Authority, South Carolina
- CPS Energy, Texas
- Elk River Utility District, Tennessee
- Greenville Utilities Commission, North Carolina
- Greer Commission of Public Works, S.C.
- Huntsville Utilities, Alabama
- Jackson Energy Authority, Tennessee
- Knoxville Utilities Board, Tennessee
- Lake Apopka Natural Gas District, Florida
- Lancaster Municipal Gas, Ohio

# Silver

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- City of Lawrenceville, Georgia
- City of Lexington, North Carolina
- City of Mesa, Arizona
- Midwest Energy Inc., Kansas
- Norwich Public Utilities, Conn.
- Okaloosa Gas District, Florida
- Owatonna Public Utilities, Minn.
- Smyrna Natural Gas, Tennessee
- City Utilities of Springfield, Missouri
- Westfield Gas and Electric, Massachusetts

# Bronze

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- Austin Utilities, Minnesota
- City of Chanute, Kan.
- Corinth Gas & Water, Mississippi
- Decatur Utilities, Alabama
- Gibson County Utility District, Tennessee
- Jefferson Cocke County Utility District, Tenn.

# Bronze

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- Long Beach Gas & Oil, California
- Oak Ridge Utility District, Tennessee
- Powell Clinch Utility District, Tennessee
- The Utilities Board of Roanoke, Alabama
- Sevier County Utility District, Tennessee
- Shelby, N.C.

# Benchmarking

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- Merges OPS Annual Report and EIA Form 176 data
- ~ 100 customer, financial and operational benchmarks
- Can create a customized per group for comparison

**Results - Data Sources: EIA Form 176, PHMSA Annual Reports and APGA membership database (Version: 2.2.3)**

<b>Peer Group:</b>	Data Sources For Year 2016		
<b>System:</b>	LOUISVILLE GAS & ELECTRIC CO For 2016		KY

**Active Filters:**

Standard - Peer Group Data Year = 2016 | Standard - State of Operation in KY

[Click here to change filter settings:](#)[Change](#)[Click here to download to a spreadsheet:](#)[CSV](#)

	Peer Group	System	Difference
Data Summary			
# of systems in peer group	84		
Data Year	2016	2016	
Miles of Mains	18,358	4,363	
# of Services	847,090	300,671	



# Customer Benchmarks

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Click here to download to a spreadsheet:

CSV

	Peer Group	System	Difference
Residential Customers			
% of total	90%	92%	2%
\$/MCF	\$10.14	\$10.36	2%
MCF/Cust	59	61	3%
\$/Customer	\$583	\$636	9%
Commercial customers			
% of total	10%	8%	-20%
\$/MCF	\$7.87	\$8.02	2%
MCF/Cust	386	416	8%
\$/Customer	\$2,395	\$2,972	24%

# Operations Benchmarks

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Click here to download to a spreadsheet: <a href="#">CSV</a>	Peer Group	System	Difference
Corrosion leaks			
leaks per mile metal main	0.04709	0.01066	-77%
leaks per metal service	0.00438	0.00259	-41%
Natural Forces leaks			
main leaks per mile	0.00087	0.00321	268%
leaks per service	0.00037	0.00013	-65%
Excavation leaks			
main leaks per mile	0.01563	0.00802	-49%
leaks per service	0.00117	0.00086	-27%
Other Outside Force leaks			

# Operations Benchmarks

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<a href="#">Click here to download to a spreadsheet:</a> <a href="#">CSV</a>	Peer Group	System	Difference
Excavation			
Damages/mile of main	0.089	0.077	-13%
Tickets/mile of main	22.2	33.2	49%
Damages/ticket	0.00399	0.00232	-42%
Excess Flow Valves			
Installed this year (% of services)	1.37%	1.05%	-23%
Services with EFVs (%)	20%	29%	49%
Sales Summary			
MCF	88,950,570	29,039,513	-67%



# Security & Integrity Foundation (SIF)

- Established in 2004
- Independent of APGA
- Assist small operators to operate safe gas distribution systems
- “Small operators” include —
  - Natural gas utilities
  - Master meter, and
  - Propane piping systems
- For 10 years funded through a cooperative agreement with PHMSA
- Is now self-sufficient



# SIF Programs

- Operator Qualification Evaluations
- Operation and maintenance procedures
- SHRIMP
- Drug and Alcohol Testing Plan tool
- Operator Qualification training
- O&M Manual creation tool
- OQ plan creation tool
- Public Awareness plan creation tool



# SHRIMP

- Simple
- Handy
- Risk-based
- Integrity
- Management
- Plan

41 SHRIMP  
users in  
Kentucky



# SHRIMP

- On-line software product similar to tax preparation software (TurboTax)
- SHRIMP asks the user a series of questions about the system and its inspection and maintenance history
- Questions change based on answers
- Output is a (nearly) complete DIM Plan



## Common Issues

1. User did not create subsections
2. User accepted SHRIMP risk ranking without review
3. User is not aware of actions required to comply with the DIMP plan
4. User did not list data sources





## Other SIF programs

- Also available:
  - Drug and alcohol plan creation tool
- Under development:
  - Operations and maintenance manual creation tool
  - Public awareness plan creation tool
  - Operator qualification plan creation tool



# New SIF Program

- Series of “Gas 101” videos
- Short (5-15 minute recorded webcasts) each addressing an important operations topic
- Target audience:
  - Newly elected, appointed Board/City Council members and other government officials
  - Newly hired employees
  - Newly promoted utility supervisors



# American Public Gas Association



[www.apga.org](http://www.apga.org) and [www.apgasif.org](http://www.apgasif.org)



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American Public Gas Association