Distribution Integrity Management Rule – APGA's Position

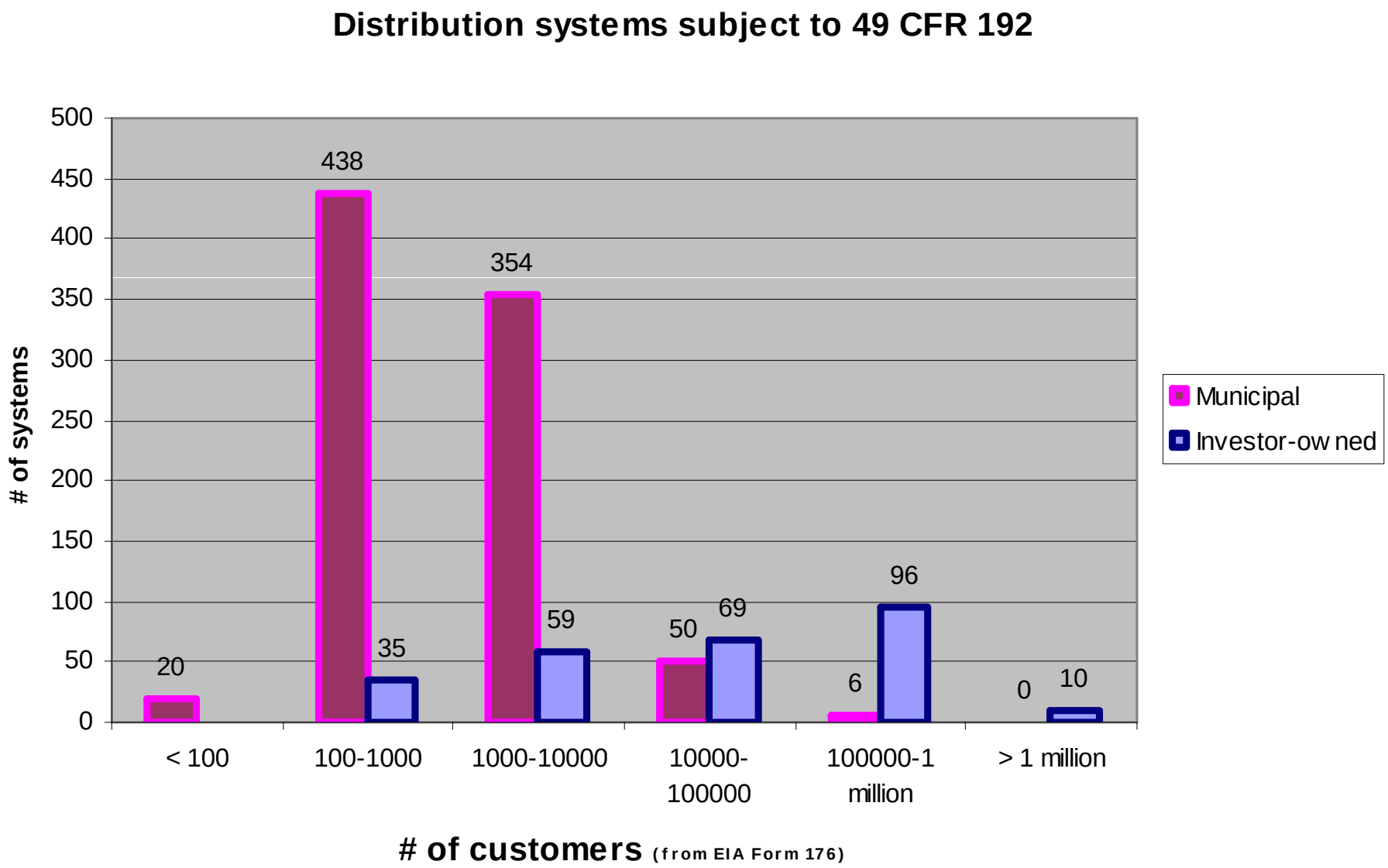
John Erickson, PE

American Public Gas Association

What Is APGA?

- American Public Gas Association
- The National Trade Association for Publicly-Owned Gas Utilities
- Created in 1961
- Moved to Washington, DC in 2004
- Nearly 700 member utilities

Most LDC's Are Small



APGA Principles For DIMP

- APGA Board Approved Resolution in 2005
- Integrity Management principles can be applied to distribution systems
- Rules must rely on as inputs data that can reasonably be expected to be known to operators of small distribution systems
- Rules must minimize the amount of data analysis required of the user

APGA Principles For DIMP

- The cost should be in line with the expected benefits
- Rules should not presume that the user is knowledgeable about integrity management and risk management principles
- Compliance should not require an engineering degree
- Rules should assume operators are qualified and understand gas inspection and repair methods

APGA Has Offered A Simplified Process

1. Get your construction and maintenance records together
2. Get your most knowledgeable operations and maintenance personnel together
3. Discuss whether any of the 8 threats are significant threats for each segment of your system, based on the knowledge and experience of your personnel and your construction and maintenance records
4. Segment the system, if necessary

Simple Process continued

5. For any threats you decide are significant, determine if these are adequately addressed by your current programs. If not, look at the listed options for reducing each significant threat and pick one or more option that you believe will best address the threat.
6. Consider how you will determine whether your program to reduce the threats to your distribution system is working – how will you measure success?

Simple Process continued

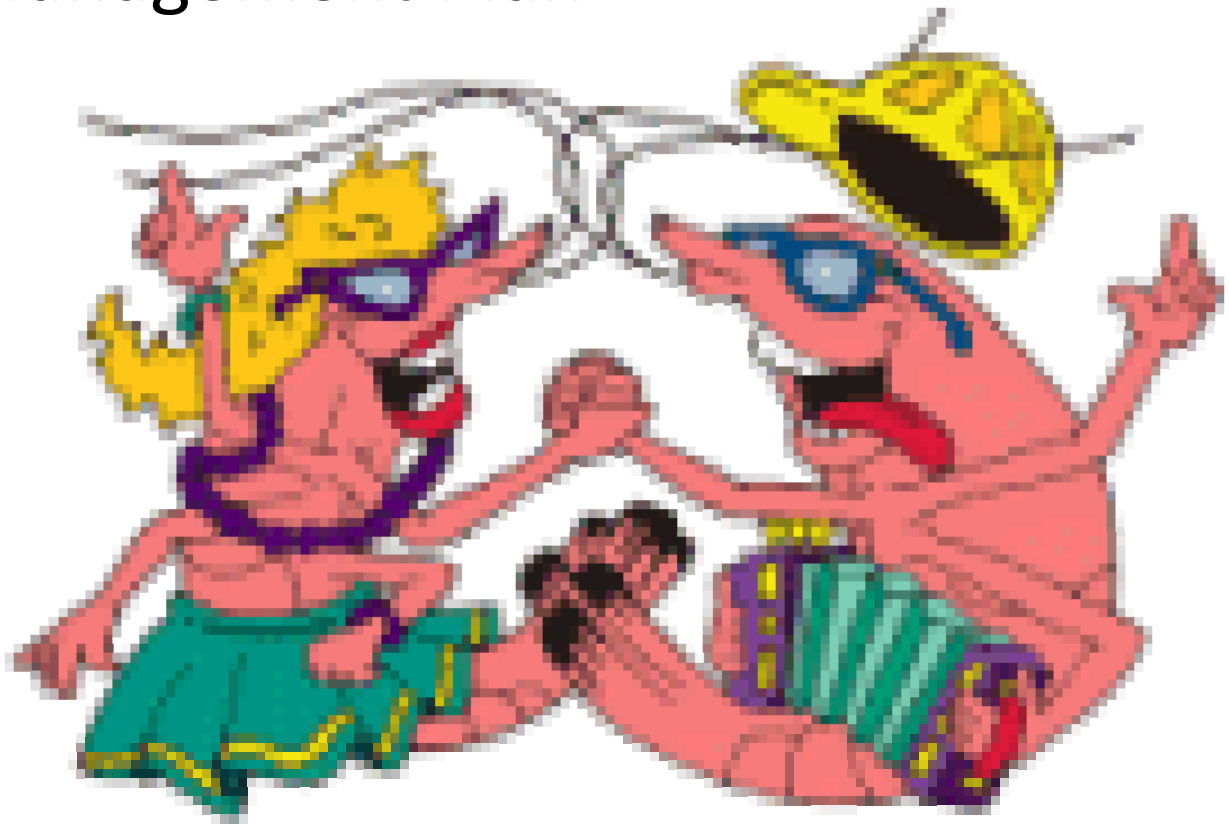
7. Write down the results of each step in this process.
8. If the performance measures for any threat are not showing improvement, go back to step 5 and consider other options to reduce these threats.
9. Repeat this process periodically

For small operators …

- First there was LIMP (Liquid Integrity Management Program)
- Then there was TIMP (Transmission Integrity Management Program)
- Next came DIMP (Distribution Integrity Management Program)
- Finally for small systems, comes ……

Introducing SHRIMP!

- Simple, Handy, Risk-based Integrity Management Plan



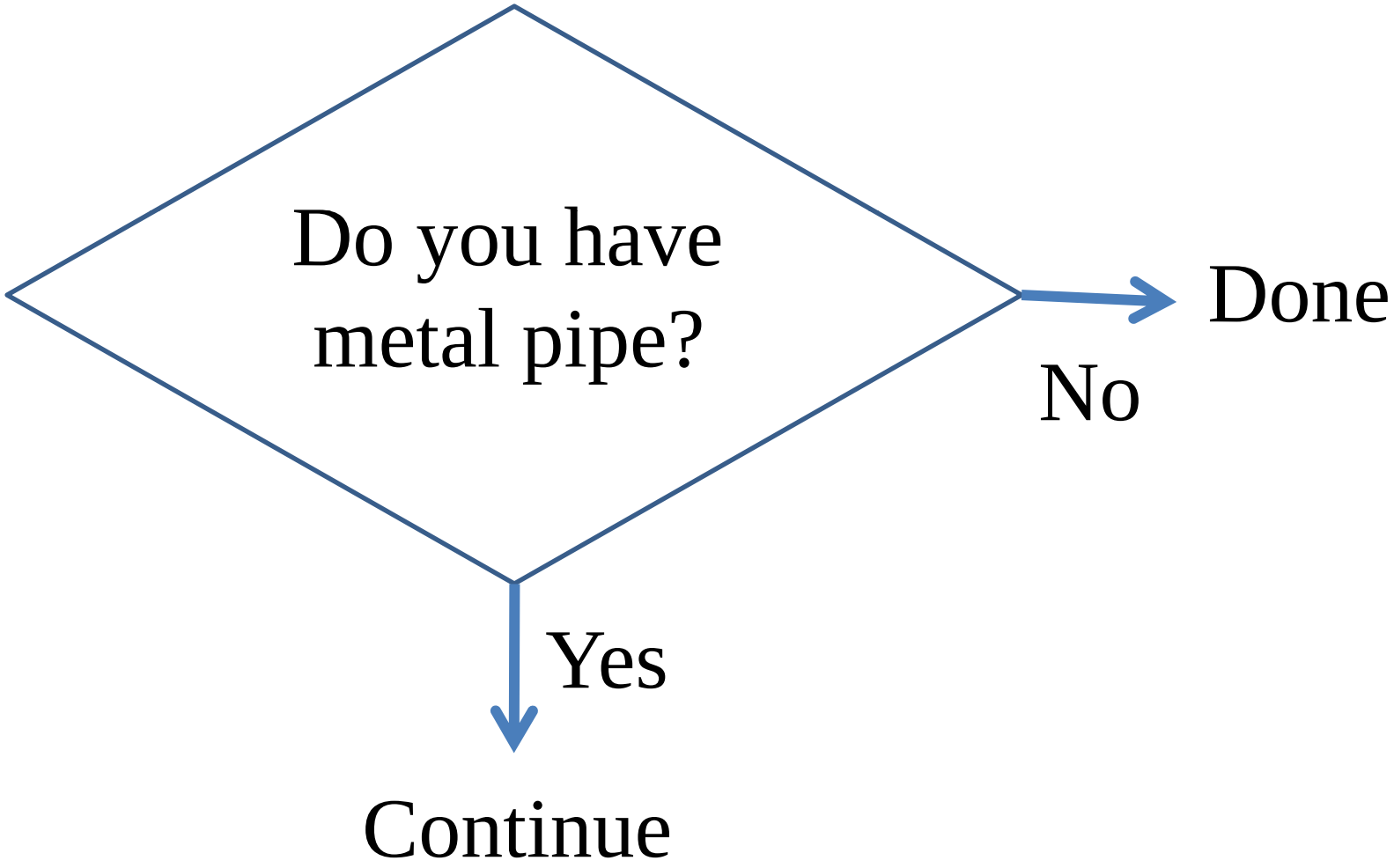
SHRIMP Concept

- Web-based software to simplify creating a customized integrity management plan (Think TurboTax)
- Development funded by PHMSA through the APGA Security and Integrity Foundation (SIF)
- Programmer – Technical Toolboxes
- Technical consultants – Heath & Associates and Viadata
- Advisory group of industry, state and federal experts

SHRIMP Process

- Q&A process to assess each of the 8 threats
- Risk ranking of threats
- Recommendations for additional actions
- Recommendations for performance measures
- Output: Complete, custom, written integrity management plan including all 7 elements
- Not limited to just small systems

Example: External Corrosion Threat



Example: External corrosion

- Evaluate different pipe types separately:
  - Coated, Cathodically-Protected Steel
  - Bare, Cathodically-Protected Steel
  - Coated, unprotected steel
  - Bare, unprotected steel
  - Cast/ductile/wrought iron, copper, aluminum, etc
  - Isolated metallic components

Questions

- Are CP levels adequate (e.g. < 0.85 V)?
- Are corrosion leaks/mile or /service increasing?
- Have visual inspections found corrosion?
- If answers are different for different parts of the system, consider splitting the system into segments and evaluating separately

Possible Additional Actions

- Phased replacement or rehabilitation of pipe (specify rate)
- Beef up CP (Add anodes or rectifiers)
- More frequent leakage surveys
- Or, if the operator is already addressing the problem, insert whatever the operator is currently doing – the rule doesn't presume the outcome will always be to do more

Possible Performance Measures

- Percent of problem pipe replaced or rehabbed
- Number of corrosion leaks per mile of metal main or per metal service
- # of cathodic protection zones with low CP levels

SHRIMP Timing

- April, 2007 – Advisory group established and contractors selected
- June, 2007 – Advisory group meeting
- December, 2007 – Agreement on threat assessment approach for corrosion threat
- Ongoing – Develop threat assessment approaches for other threats
- Coincident with final rule – Beta version

SHRIMP Timing -Continued

- 6 months after final rule – Final version of SHRIMP
- After final rule – Conduct 12 state and regional seminars to explain the rule and how to use SHRIMP to comply
- SHRIMP will be free to small systems with a nominal charge to larger operators

Questions

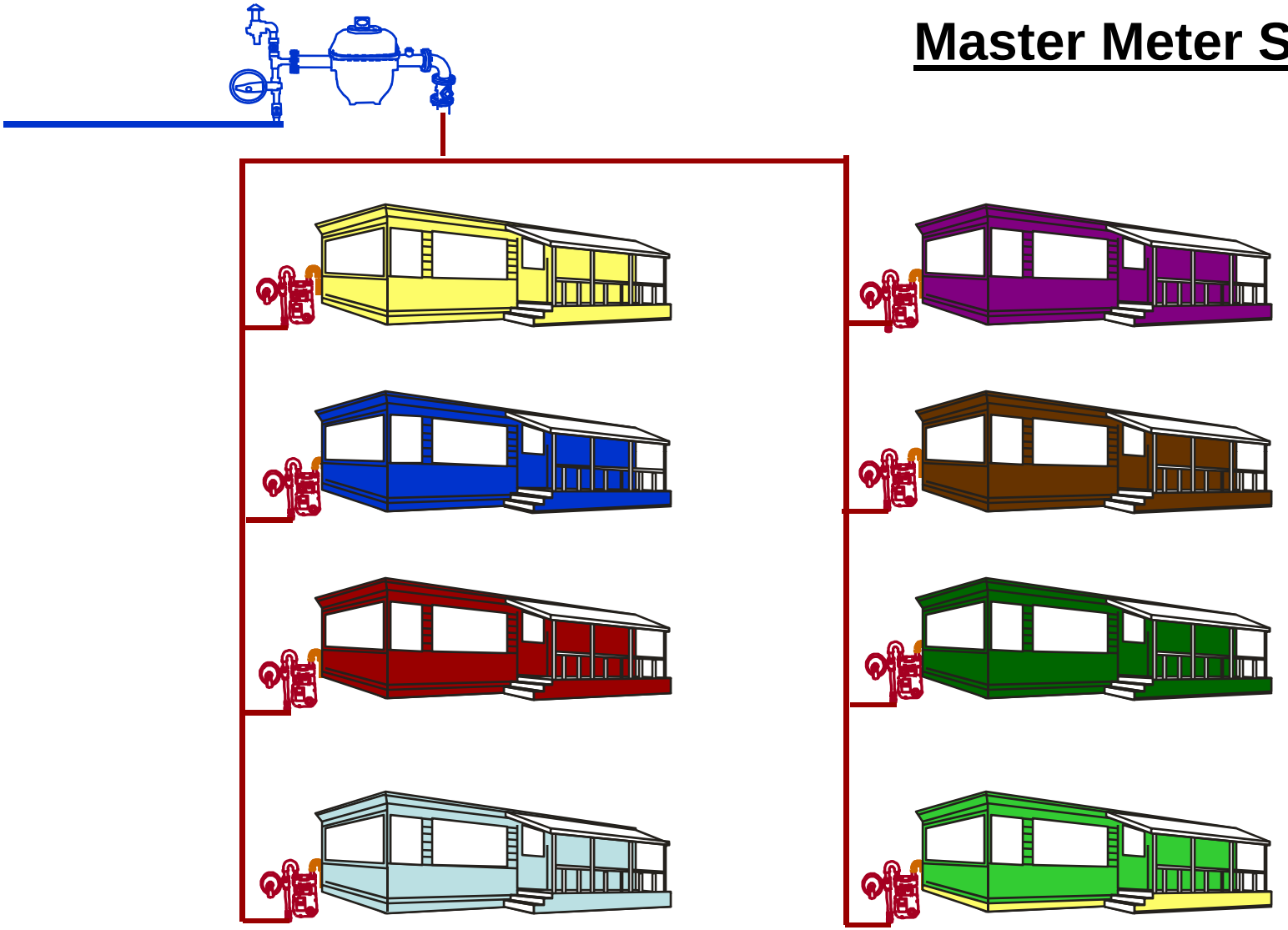
- jerickson@apga.org
- 202-464-0834
- www.apga.org

Integrity Management for Master Meter and LPG Operators

Master Meter and LPG

- Classified as distribution systems but pose lowest risk
  - Gas distribution not a primary business Simple systems
  - Limited geographical area
  - All low pressure
  - Often better control over excavation
- Trailer parks are an example

Master Meter System



Operated by the LDC

Owned by Customer

Operated by the Master Meter

LPG System

Master Meter and LPG

- Already exempted from many Part 192 requirements (particularly reporting)
- Less risk
  - Many operators (estimate 8000)
  - Very few accidents
- Imposing DIMP would be high burden for little benefit

Master Meter and LPG

- Apply basic principles at more-appropriate level of effort
- Exclude from risk analysis and performance measure reporting
- Infrastructure knowledge – forward looking
- Simple IM plan – Appendix F checklist

Master Meter and LPG

- Is exclusion appropriate?
- Should other “small” operators be treated similarly?
  - If so, what defines “small?”