

the voice and choice of public gas



R&D Priorities of the American Public Gas Association

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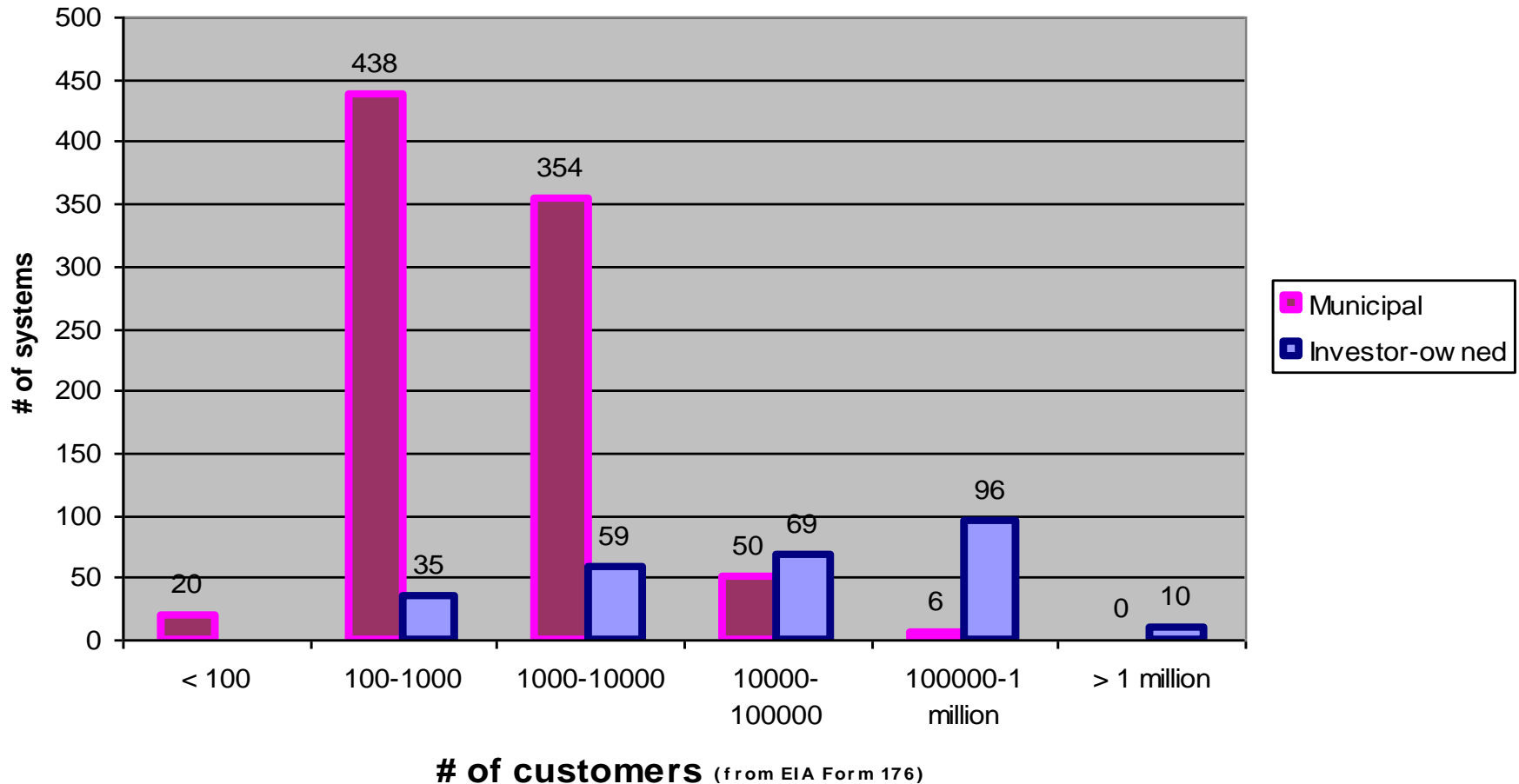
APGA

- **The** national trade association for publically-owned natural gas utilities
- ~1000 community-owned gas systems
 - ▶ 37 states
 - ▶ >5M Customers
 - ▶ ~21,000 Employees
 - ▶ ~120,000 Miles of Main
- Systems size (Meters): 12 to ~500,000
- Largest cities: Philadelphia, San Antonio, Indianapolis, Memphis, Long Beach



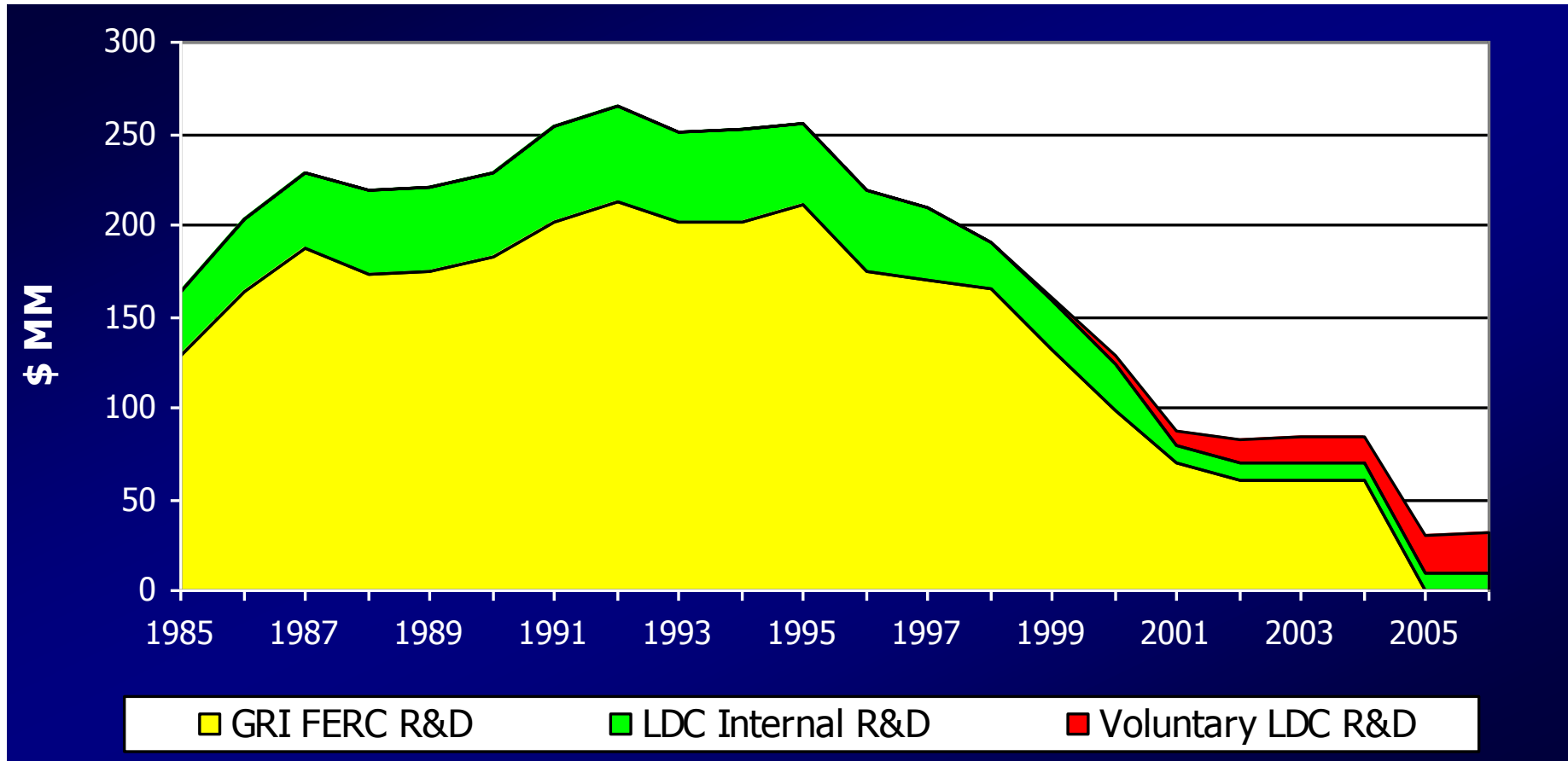
Most LDC's Are Small

Distribution systems subject to 49 CFR 192





History of Gas Industry R&D Funding





APGA Research Foundation

Formed in February, 2004

About the Research Foundation:

The APGA Research Foundation (RF) is a not-for-profit 501(c)3 corporation that serves as the “bank” for public gas systems to contribute and allocate voluntary dollars to gas industry research and development. The RF supports, directs, and manages R&D projects focused on gas operations and gas utilization for the benefit of public gas systems and their customers.



APGA Research Foundation

Quick Facts

- ✓ 150 investors / out of a potential 1,000 investors
- ✓ 24 Board Members
- ✓ Investment strategies:
 - OTD – Operational Technology Development
Benefit ratio: 20 - 1
 - UTD – Utilization Technology Development
Benefit ratio: 12 - 1



APGA RF – OTD Investments Project (Working Groups)

- Pipe and Leak Location
- Pipe Materials, Repair & Rehabilitation
- Excavation and Site Restoration
- Pipeline Integrity Management & Automation
- Operations Infrastructure Support
- Environmental Science and Forensic Chemistry



Failures vs Incidents

Reported Cause of Incidents and Failures 2005-2007	# OF INCIDENTS	# OF FAILURES	INCIDENTS/1000 FAILURES	Normalized to corrosion
CORROSION	6	293933	0.02	1
EXCAVATION DAMAGE	73	338666	0.22	11
INCORRECT OPERATIONS	8	30145	0.27	13
MATERIAL FAILURE	8	147384	0.05	3
EQUIPMENT FAILURE	6	140442	0.04	2
NATURAL FORCE DAMAGE	22	77229	0.28	14
OTHER OUTSIDE FORCE DAMAGE*	39	37426	1.04	51
ALL OTHER CAUSES	NA	NA	NA	
*Excluding fire first incidents				



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Potential Research Issue?

- Vehicular damage to distribution facilities
 - is it a research issue?
- 51 times as likely that a vehicular damage failure will lead to an incident than corrosion failures
- “Insufficient data ... to develop a coherent understanding of the nature of the [vehicle damage] problem” – DIMP Phase 1 Report
 - Size, speed, barriers, distance to road, under or out of control, etc are unknown variables.



Conclusion

- Distribution pipeline safety issues are very different than transmission and liquid issues
- R&D funding has drastically decreased since funding became voluntary in 2004
- The APGARF is making a concerted effort to increase funding for critically needed R&D

QUESTIONS?

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