

Energy Security

The Municipal Perspective

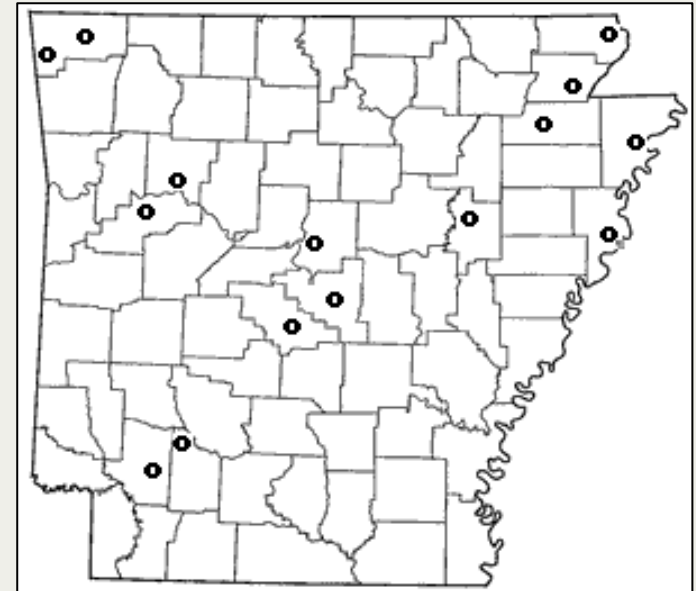


Municipal Power in Arkansas

Electric service provided by or through local government.

- One of the three electric business models.
- Fifteen entities spread throughout Arkansas.
- **NOT** regulated by the Public Service Commission.
- Informally organized as the Arkansas Municipal Power Association or “AMPA.”
- Members are transmission dependent.
- Many members own generation assets, but most buy power to meet their needs.

AMPA



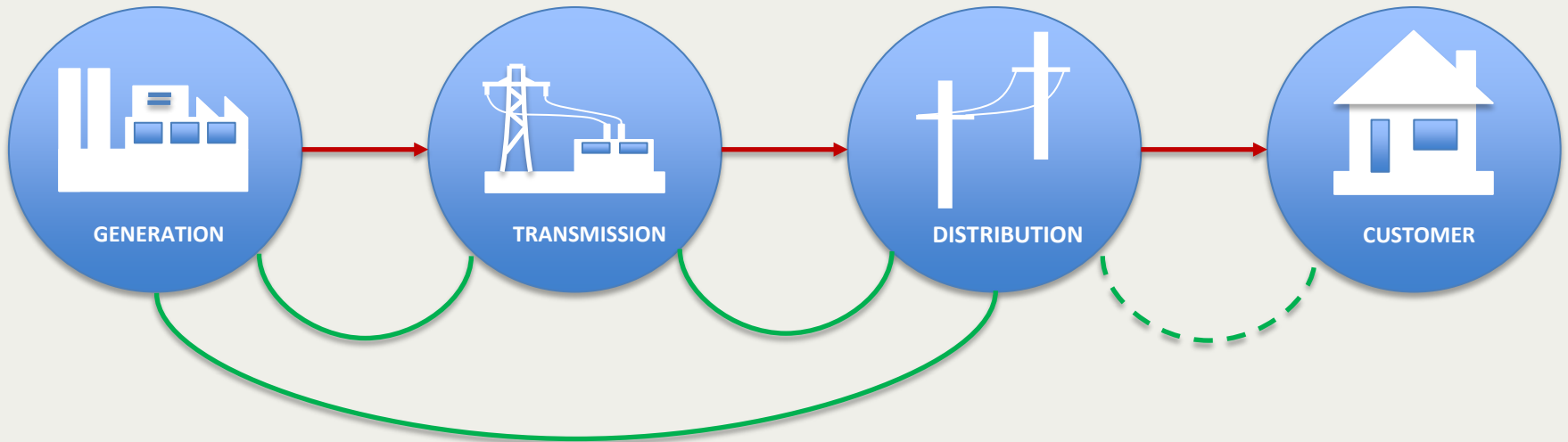
Reliable – Affordable - Responsible

Municipal power providers add value to society by combining their efforts with other functions of local government.



Legacy Structure

POWER FLOWS

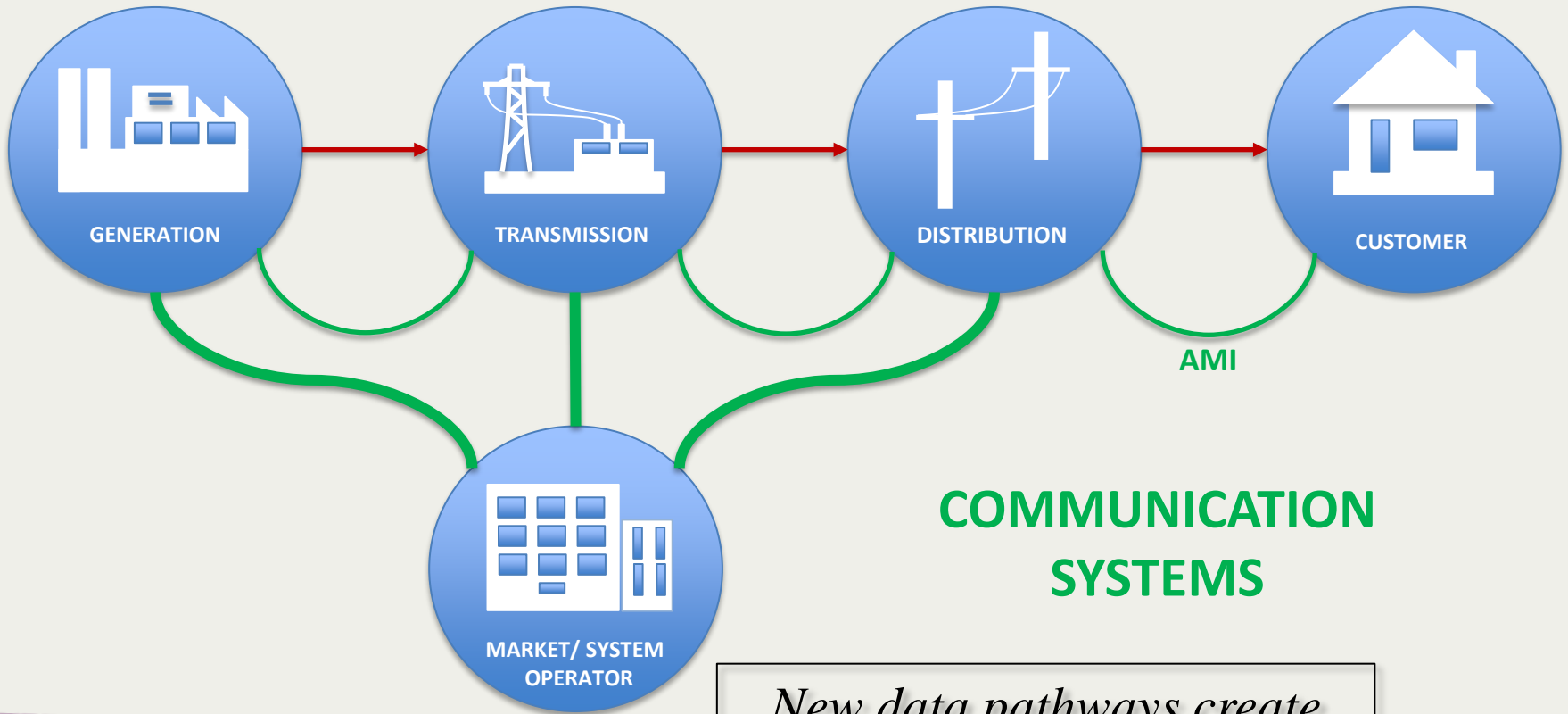


COMMUNICATION SYSTEMS



Modern Structure

POWER FLOWS



COMMUNICATION SYSTEMS

New data pathways create efficiency and vulnerability.



Phishers

Criminal Groups

Nations

Insiders

Hackers

Spyware/Malware authors

Terrorists

CYBER

THREATS

PHYSICAL

Stuxnet

2009 – smart meters hacked to change power consumption settings

2013 Three attacks on Entergy infrastructure in Lonoke County.

2013 sniper attack on PG&E's Metcalf substation.

Slammer

2011 theft of copper from NLR's Galloway substation.

“The importance of cyberspace to the American way of life – and to the Nation’s security – makes cyberspace an attractive target for those seeking to challenge our security and economic order.”

Dept. of Defense 2014 Quadrennial Defense Review



Response to Threats

- Increase community awareness
- Harden potential targets
 - Cyber systems
 - Generators
 - Substations
 - Headquarters
- Improve breach detection, response and recovery
- Continuously refine and change defense, detection, and response systems.



Security Challenges - FOIA

Arkansas Freedom of Information Act

- A.C.A. 25-19-105: “Except as otherwise specifically provided by this section or by laws specifically enacted to provide otherwise, all public records shall be open to inspection and copying by any citizen of the State of Arkansas ...”
- A.C.A. 25-19-103(5)(A): “Public records” means writings, recorded sounds, films, tapes, electronic or computer-based information, or data compilations in any medium ... All records maintained in public offices or by public employees within the scope of their employment shall be presumed to be public records.

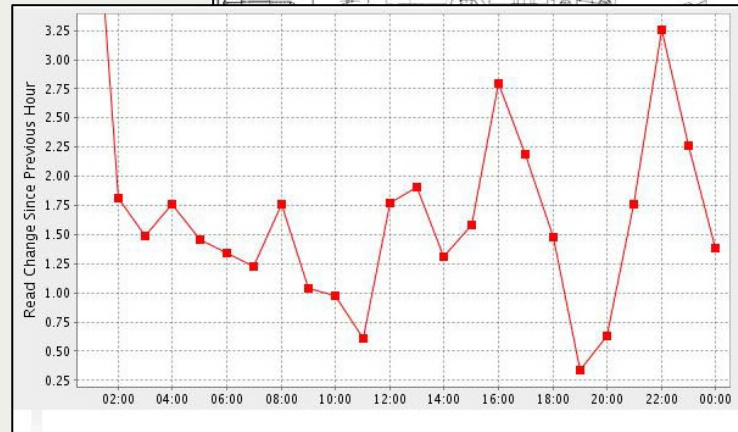
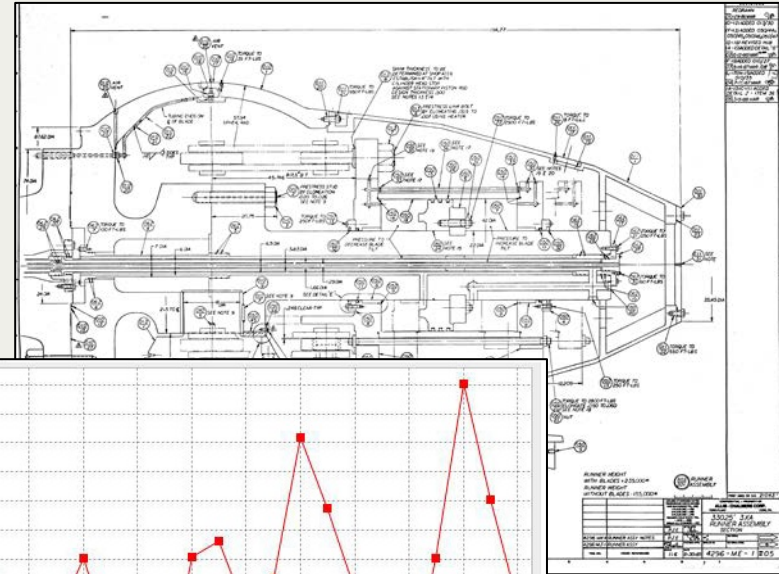
There is no exception to mandatory disclosure of records pertaining to electric system security or detailed customer information.



Security Challenges - FOIA

The Arkansas FOIA mandates public disclosure of:

- Vulnerability assessments
- Blueprints of generators and facilities
- Computer and communication system architecture
- Security camera layouts
- Intrusion detection diagrams
- Software vendors
- Incident response plans
- Detailed customer information.



Security Challenges – P³

Public-Private Partnerships (P³) within the electric industry are necessary to mitigate the occurrence and effect of security breaches.

- Government agencies need a confidential conduit to share information related to threats.
- Electric industry participants need a confidential conduit to share information related to breaches and vulnerabilities.
- Local government should be included in response plans.

Information sharing requires a framework of trust between government and the electric industry. FOIA inhibits this relationship.



Conclusions

- New technology has created new vulnerabilities in the energy industry.
- Security must be upgraded to meet evolving threats, but the precise solution is elusive.
- Resiliency is as important as security.
- We need to narrowly craft exceptions to FOIA that protect our electric infrastructure and the privacy of our customers.

