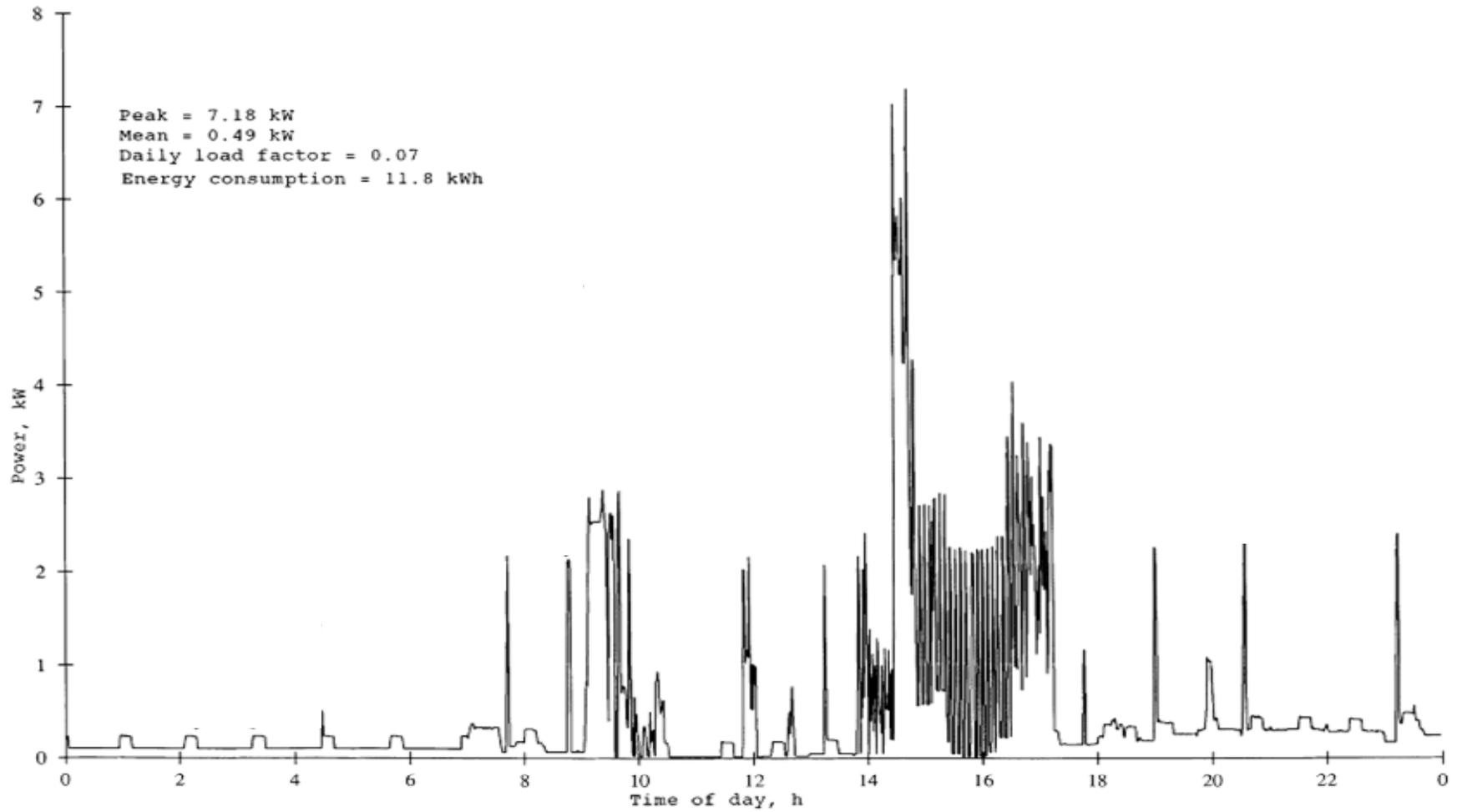


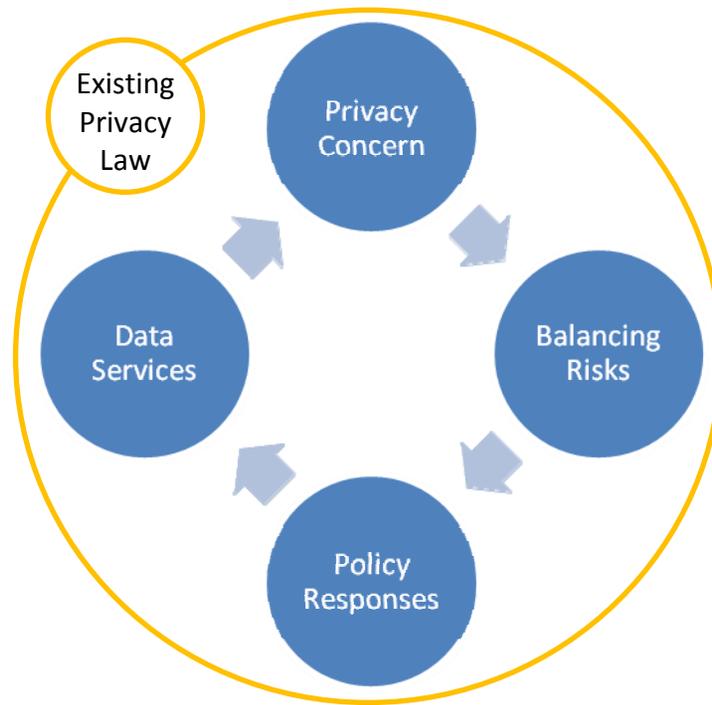
# PRIVACY AND THE SMART GRID

Elias L. Quinn  
April, 2009

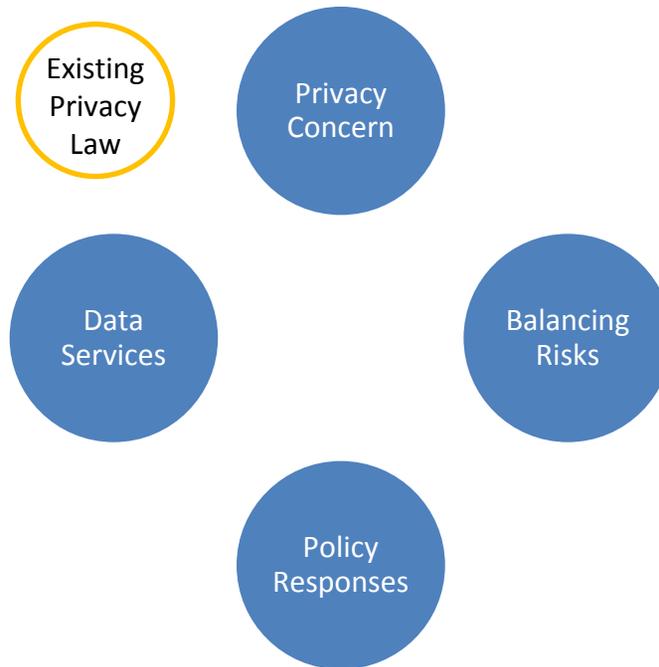
Growth Details:  
\$35,340.00 -  
\$34,094,430.00  
\$3,456.00 +  
\$5,056.03 +/-  
\$56,035,345,009.00  
\$5,545.00 -  
\$567 >  
\$5,067,345.00 =

# THE HEART OF THE MATTER





- Privacy Concern
- Balancing Risks
- Existing Privacy Law
- Policy Responses



Privacy Concern

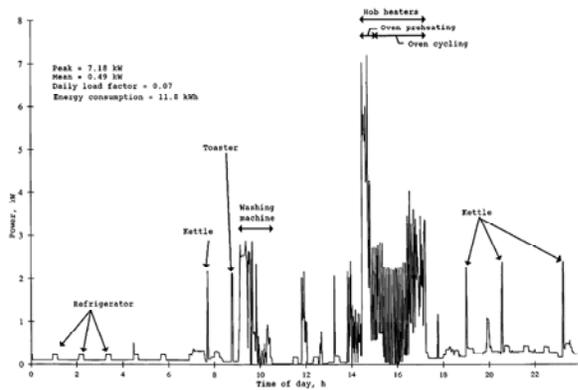
Balancing Risks

Existing Privacy Law

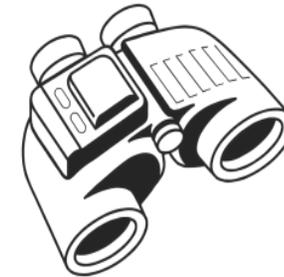
Policy Responses

# SMART GRID PRIVACY CONCERNS

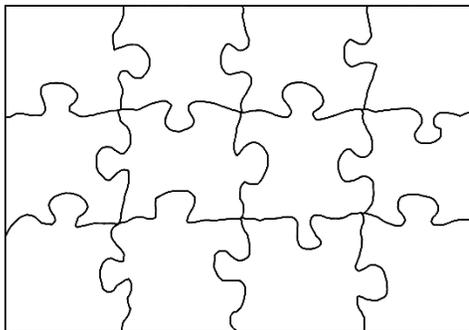
## Individuated Patterns



## Real Time Surveillance



## Electronic Detritus



## Physical Invasion



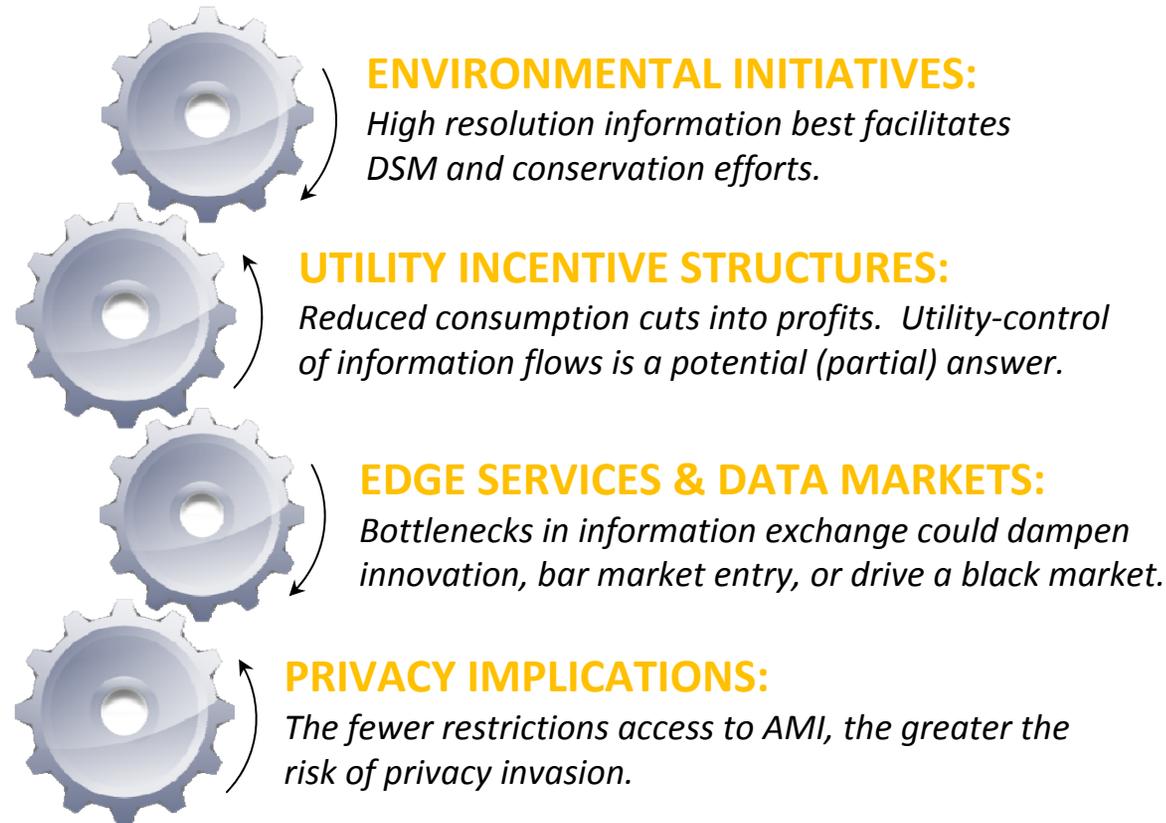
Privacy Concern

**Balancing Risks**

Existing Privacy Law

Policy Responses

# COMPETING POLICY CONCERNS



**Technological decisions and standards are not policy-neutral.  
Unbundling the smart meter will alter the calculus.**

Privacy Concern

Balancing Risks

Existing Privacy Law

Policy Responses

# COLORADO'S PRIVACY REGULATIONS

## EXAMINATION

4 C.C.R. § 723-1-1004(t): Defines protectable “personal information” broadly, excludes info “necessary for billing.”

4 C.C.R. § 723-1-1104: Requires consumer informed consent prior to information disclosure; prohibits umbrella opt-in mechanisms.

C.R.S. § 6-1-716: Requires customer notice of security breach; references even narrower definition of “personal information.”

## DIAGNOSIS

*Exception likely to swallow the rule.*

*Unnecessarily inflexible in light of rapid changes and growth in edge services.*

*Definitions generally do not contemplate information such smart-metered data.*

## *Disclosure Consent Regulations*

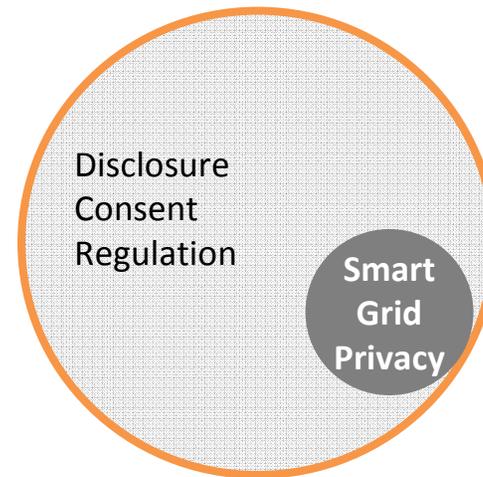
**Opt-in:** Customers affirmatively allow their information to be shared.

**Opt-out:** Customers are provided with an opportunity to take their name off the list for information sharing.

→ Case-by-case, or umbrella consent.

### **Combination, e.g.,**

1. Umbrella opt-out for joint venture or electricity service partners.
2. Umbrella opt-in for efficiency consultants and automation vendors
3. Case-by-case opt-in for entities unrelated to electricity provision (such as data brokers, insurance)



## *Protection Requirements* (Electric Utilities & 3<sup>rd</sup> Parties)

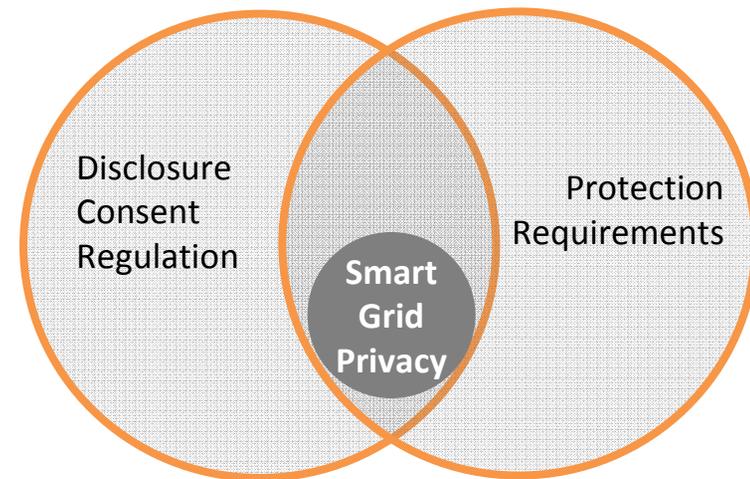
### A. Confidentiality Agreement

- Prohibited from sharing info.
- Subject to PUC restrictions

### B. Procedural Best Practices

1. processed fairly and lawfully,
2. sought/collected/analyzed only for specified purposes,
3. merely adequate and not excessive for the purposes motivating its collection,
4. kept accurate, and
5. Kept in a form allowing for identification for no longer than necessary

*from EU Directive 95/46/EC Art. 6(1)*



## *Protection Requirements* (Electric Utilities & 3<sup>rd</sup> Parties)

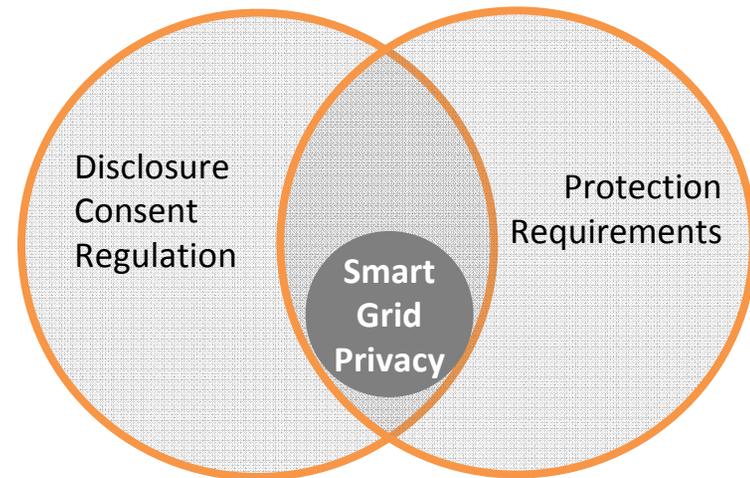
### C. Technological Protections

“Industry Standards” for Security  
*e.g., Texas Code § 25.130(j)(3)*

Clean Air Act Method for Tech. Protections:

- **BACT**: Best Available Control Tech.
- **BDT**: Best Demonstrated Tech.
- **RACT**: Reasonably Available Control Tech.  
*CAA §§ 165(a)(4), 111(a)(1), 172(c)(1)*

### D. Audits , Reports, Self-Assessments.

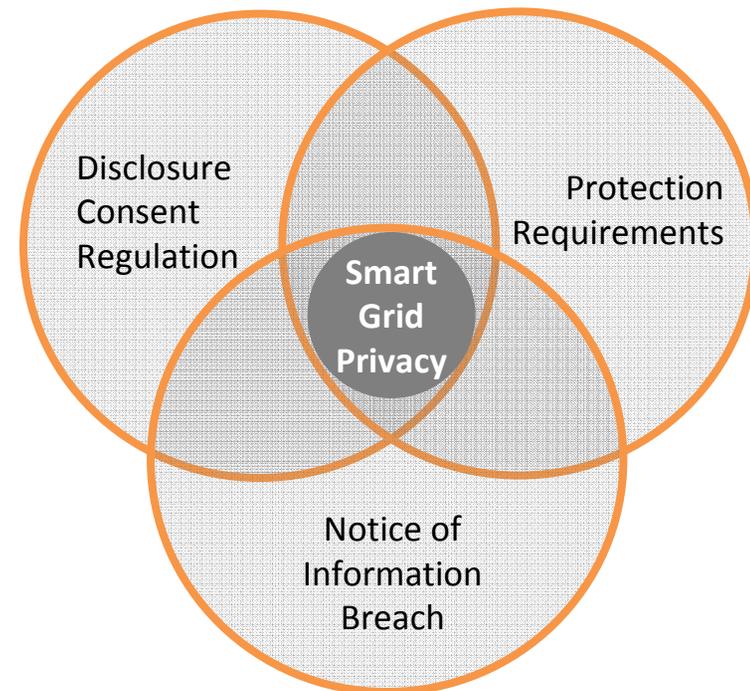


## *Notice of Information Breach*

Ensure smart grid information triggers notice obligations.

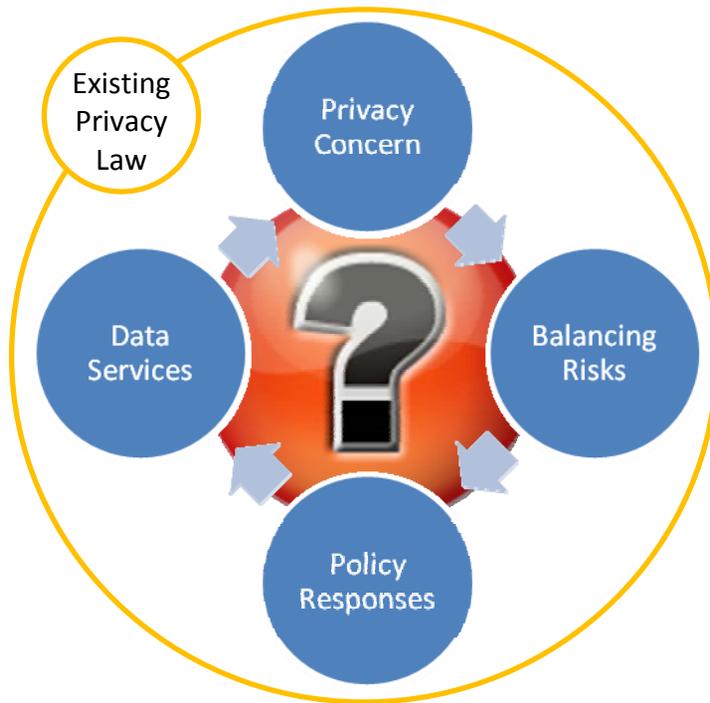
Notice to both the electricity customer and to the PUC.

Safe haven if security audits are clean.



- Privacy Concern
- Balancing Risks
- Existing Privacy Law
- Policy Responses

# QUESTIONS?



Elias L. Quinn  
University of Colorado Law School  
eliquinn@gmail.com